PART : 3

THE YEARS OF CONSTRUCTION & TRANSFORMATION

DUBAI
from small Village
to Global City

Qassim Sultan

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DUBAI: From Small Village to Global City

By: Qassim Sultan

PART: 3

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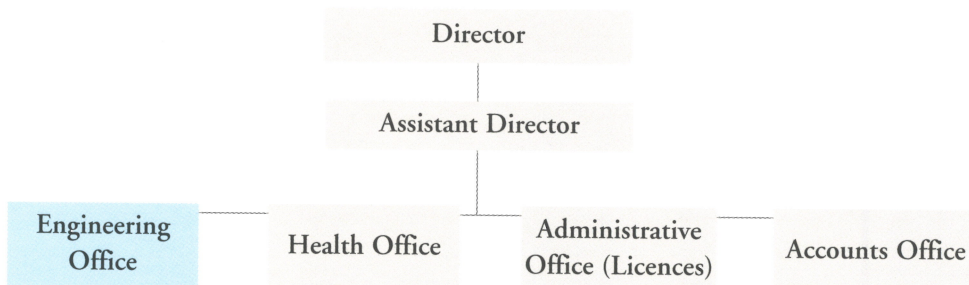
Building & Housing Department

One of the priorities of the Dubai Municipality since it was established has been to organise and to supervise construction activity. This has grown immensely since the nineteen-sixties, when the number of engineers and technicians employed by the Municipality began to grow rapidly, a process which has continued ever since. From the outset, the Municipality has endeavoured to use the latest systems and building methods.

In 1962, the first Organisation Chart for the buildings sector was established, covering four sections, those for Engineering, Health, the Administrative Office (Licences) and the Accounts Office, as shown in Chart No.1.

Chart No. 1. Organisation Chart for Dubai Municipality in 1962



The process of expanding the engineering services offered by the Municipality then got under way. In 1964, the Municipality had only two engineers, one surveyor and two assistant technicians responsible for these services.

One early task was the drawing up of a system for issuing licences for engineering firms and consultancy offices and for classifying them. The procedure for this was laid down by terms of a Local Order issued in 1967, which forbade the offices of engineering consultants from taking on contract work or commercial activities related to building materials. They were also forbidden to copy designs made by other firms, so as to protect copyright in such materials.

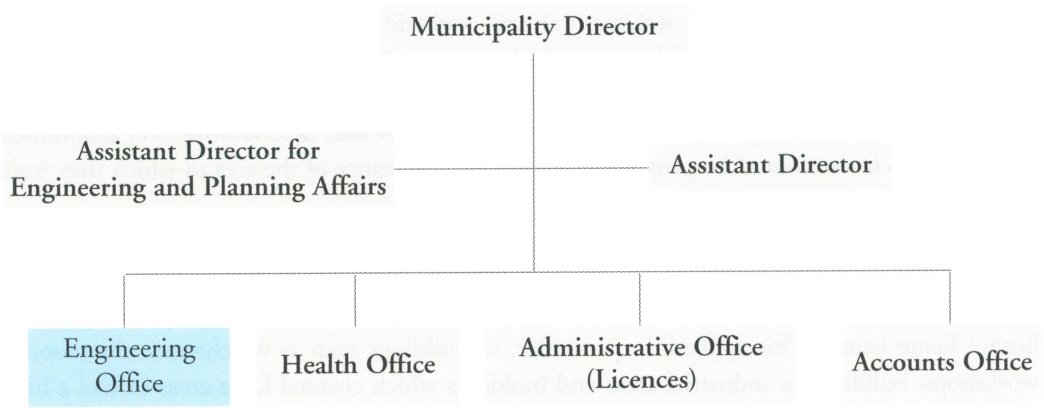
In order to regulate the process of collecting sand, for making concrete, and earth and sabkha for the use in back-filling sites, another order, Local Order No. 18 for 1967, was issued, specifying those areas which could be used as sources of such material.

With the expansion of the engineering and technical expertise available within the Municipality, it was decided that any construction plans for buildings should be presented for review, licencing and approval by the Director-General before work could commence.

Administrative Order No. 8 for 1968 was, therefore, issued to regulate plans for building and maintenance and provide for the issuing of the relevant licences.

At the beginning of 1969, as a result of the increasing workload of the Municipality, engendered partly by the increasing number of applicants for permissions related to engineering work, it was decided to introduce administrative and technical amendments to the existing system so as to speed up the completion of applications relating to planning and buildings. Accordingly Administrative Order No. 4 for 1969 was issued, relating to the appointment of a Technical Assistant for the Director of Engineering and Planning Affairs. The Organisation Chart was amended, as shown in Chart No. 2.

Chart No. 2. Organisation Chart for Dubai Municipality in 1969



Issuing of Laws and Building Regulations

With the increase in demand for Building Licences, in 1970 Local Orders approved by the Dubai Municipality Council were issued, laying down the Building Rules and Regulations for Dubai Municipality.

These stipulated that no construction work could take place until a Building Licence had been issued and until after there had been a study of the area concerned, including delineation of its precise dimensions. They also stated that all construction work must be undertaken in according with the specifications of the approved plans and the conditions stipulated in the building licence. Additionally, the Municipality engineers were given the right to enter these locations to inspect them and take samples for laboratory tests. These laws also emphasised the importance of safeguarding the safety of labourers through implementing the appropriate safety procedures and spelt out the relevant requirements for prevention, sewerage, rainwater drainage, water and electricity supplies and telephone connections. The laws also stipulated that use of a building could commence only after issuing of a Certificate of Completion.

The issuing of these laws provided the basic framework governing the carrying out of construction work in Dubai. This framework included:

First: The introduction of the need for proper building plans and the issuing of a Building Licence/Permit.

Second: A study of the exact area involved and the issuing of location and issue of a Building Plot Certificate

Third: Regular inspection of the process of construction and a monitoring of building materials used.

Fourth: Issue of a Certificate of Completion for the building, once completed and before use.

Further revisions to organisational procedures and the issuing of new laws related to construction activity followed. Thus, in 1972, a decree was issued pertaining to the importance of issuing a Certificate of Completion for buildings which had been completed in order to ensure that the building rules and specifications had been implemented in accordance with the Building

Licence Certificate, so as to ensure that contractors abide by the relevant rules and regulations. Water and electricity services were not to be connected until this certificate had been produced.

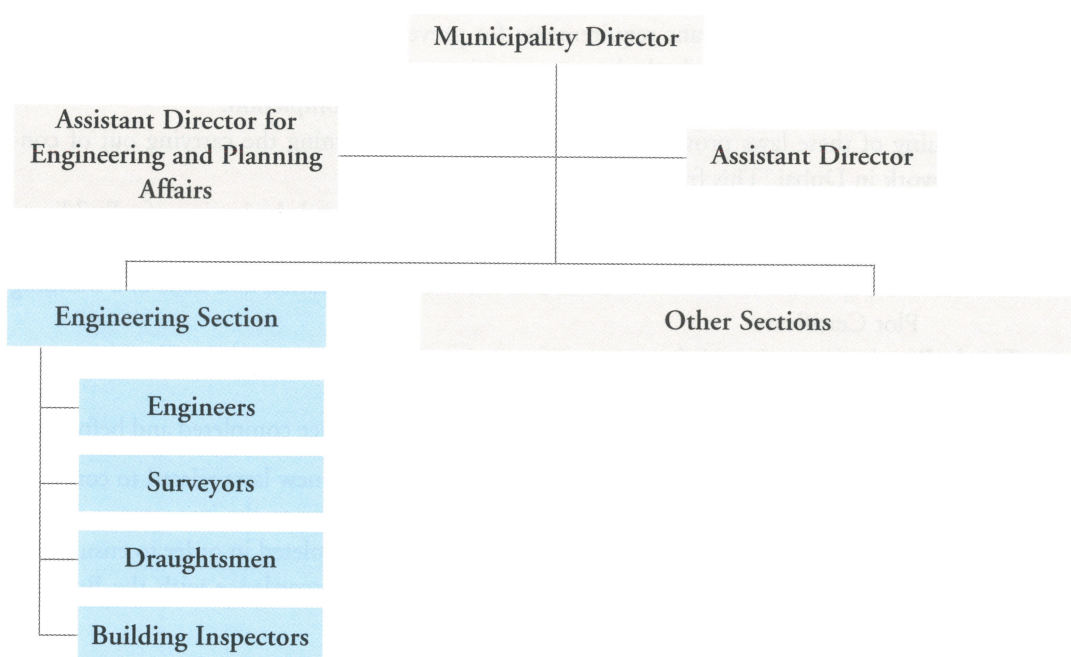
The need to take care of the architectural and aesthetic appearance of buildings was then addressed, to ensure that new buildings were in harmony with existing ones. In 1972, for example, Local Order No. 17 laid down rules specifying the importance of maintenance, both of buildings and surrounding walls, and on the need to remove old, deteriorating and abandoned buildings which were out of keeping with the general appearance of the area in which they were located.

In 1973, Administrative Order No. 55 was issued, as part of a drive to ensure that buildings were protected against the danger of fire. This spelt out that, where required, building plans would have to be modified so as to obtain approval from the fire services, prior to a building licence being issued. This applied, in particular, to buildings such as warehouses, showrooms, workshops, buildings in industrial areas and buildings which covered large areas or had a high elevation.

In order to ensure that the contractor implemented the fire, health and safety regulations in buildings, in accordance with the Building Licence, Administrative Order No. 80 was issued in 1974. This linked the issue of a Certificate of Completion for multi-storey buildings to the obtaining of approval from the fire services, stating that the relevant fire prevention procedures and requirements had been implemented.

In 1974, a support mechanism was established for the Engineering Section with its varied engineering and technical duties and responsibilities which, by this time, included planning, the issuing of building licences, building inspections, surveying, draughtsmanship and sewerage. In addition, a Chief Engineer was appointed, as shown in Chart No. 3

Chart No. 3. Organisation Chart for Dubai Municipality (Engineering) in 1974



The establishment of the Building Section

In the mid-seventies, there was a sudden and marked boom in construction in Dubai, affecting housing, commercial and industrial buildings. The number of applications for licences increased, as did the number of individual applicants seeking help to complete their licence applications. It was, therefore, decided to create an independent section in the Municipality to undertake this work, as part of the Engineering Section. Administrative Order No. 24 for 1976 was issued to establish this Building Section, providing for it to be independent, and to be run by a Head of Section assisted by an engineer to carry out technical supervision. The duties of the Section and its Units were specified as follows:

1- Building Licences Unit

The work of this Unit concentrates on the issuing of Building Licences and on reviewing the carrying out of the specifications and laws and the rules for new buildings, annexes, modifications and maintenance laid down by the Municipality. This Unit was established with a Head of Unit and Secretary, followed by the increase of the number of civil engineers and draughtsmen from two to three each and the appointment of an architect.

2- Building Inspection Unit

This Unit was responsible for the inspection of buildings to see that they had been constructed in accordance with the approved plans, for reporting buildings presenting hazards and for halting work on unlicenced buildings or on those violating their licences and preparation of reports on such buildings. This Unit originally had two inspectors (later rising to a total of fourteen). Subsequently, two engineers were seconded from the Planning Section, one to work as a civil engineer and the other given the responsibility of managing the Unit.

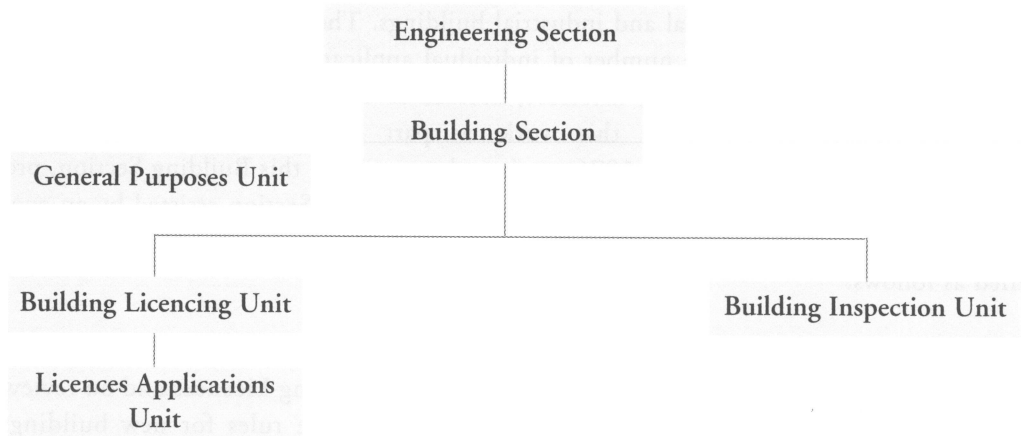
There were also two autonomous units within the Building Section, the Licence Applications Unit and the General Purposes Unit.

The Licences Application Unit, linked to the Building Licences Unit, was responsible for the receipt of construction plans and designs presented for approval and licencing and the delivery of these to the relevant person. It was also responsible for receiving deposits and fees.

The General Purposes Unit had three employees, two inspectors and a third specially-selected local representative with knowledge of the national population of Dubai. They received instructions directly from the Head of the Buildings Section with regard to applications presented to the General Purposes Committee affiliated to the Municipality Council that relate to government housing for nationals and the distribution of such housing. The Unit was also responsible for maintenance work or extensions required for government houses.

Following its establishment in 1976, the Organisation Chart for the Building Section was as shown in Chart No. 4.

Chart No. 4. Organisation Chart for Building Section in 1976



Buildings Inspection Unit	
Post	No.
Head of Unit	1
Civil Engineer	3
Architect	1
Draughtsman	3
Secretary	1
Messenger	2
Total	11

Building Section Posts	
Post	No.
Head of Section	1
Assistant Head of Section	1
Secretary	1
Messenger	1
Total	4

General Purposes Unit	
Post	No.
Inspector	2
Local Representative	1
Total	3

General Purposes Unit	
Post	No.
Clerk	3
Total	3

Building Licences Unit	
Post	No.
Head of Unit	1
Civil Engineer	1
Building Inspector	14
Secretary	1
Messenger	2
Total	19

Both the Building Section and the Planning Section were initially affiliated to the Engineering Section, this creating some overlap in terms of authorities and responsibilities. Administrative Order No. 25 for 1976 was, therefore, issued to divide and re-distribute responsibilities. The responsibilities of the Building Section then included supervision of the Building Licences Committee, inspection and study of buildings and the approving of and issuing of Building Licences, as well as monitoring the construction of buildings at all stages. The Building Licences Committee itself was transferred from the Planning Section under the terms of this administrative re-organisation.

Once the duties and responsibilities of the Building Section had been defined and clarified, they were then allocated to the Building Licences and Monitoring Units.

The following duties were initially allocated to the Building Licences Unit:

Receipt of licence applications and the study of plans from the architectural and construction aspects, verifying the ownership of property, studying construction problems brought to the attention of the Municipality and the issuing of Building Licences.

Under the terms of Administrative Order No. 18 for 1976, new responsibilities were added, including the audit of Building Licences and of survey landmarks (Certificate of Building Landmarks) as well as enduring that construction work was carried out in accordance with the licence and the laws and rules of the Municipality. This included a monitoring of the construction materials, to ensure that they were suitable, checking to ensure that the consultant engineer was present on site, as appropriate, and laying down guidelines on the organisation and appearance of construction sites.

This was followed by the issuing of further Administrative Orders dealing with the work of the Building Licences Committee, designed to speed up the decision-making process. These included:

- Administrative Order No. 48 for 1976, specifying the maximum timescale for the completion of licence applications presented to the Municipality.
- Administrative Order No. 64 for 1976, laying down a framework for the recording of written objections from committee members and also dealing with the timely completion of the processing of applications.

Another step forward was taken with the creation by the Municipality of a sub-committee known as the 'Facade Committee.' This was given the responsibility for ensuring that the facades of new buildings requiring licences were in accordance with the relevant aesthetic and artistic requirements. This was of particular importance in key central areas.

- A number of other Administrative Orders related to buildings were also issued in 1976. Among them were:
  - Administrative Order No. 3 for 1976, relating to controlling the process of issuing building licences for land in residential areas or on main streets.
  - Administrative Order No. 4 for 1976, relating to the rejection of applications for licences to build boundary walls, but no other structures, on land granted to applicants by the Government.
- Administrative Order No. 6 for 1976, relating to the setting up of a committee to list dilapidated houses and shops or those which had been abandoned, were in a dangerous condition or that were overlooking Beniyas Square.

- The work of the Building Section was, of course, of very considerable importance, in view of the rapid process of development then under way in Dubai. Administrative Order No. 52 for 1976, therefore, spelt out the necessity of a copy of the building inspectors' daily reports on their inspections being sent to the Municipality's Director, so that the Administration was kept up to date with progress and would be enabled to provide comments, if any.

Building Section and the development of brick factories

In 1985 there were a number of brick factories in the Abu Hail area, these originally having been established on a temporary basis. With the preparation of a new planning structure for the city of Dubai, it was decided that these should be transferred to a new location. In order to ensure that this task was carried out in accordance with the appropriate technical requirements, Administrative Order No. 104 for 1985 was issued to establish a committee headed by the Deputy Chief Engineer with its members including engineers from the Building Section, the Building Materials Laboratory and the Planning Section. This committee was charged with the responsibility of laying down the necessary conditions and specifications for the moving of the factories to the Al-Qusais area.

After the carrying out by the committee of examinations in the field and of the appropriate discussions, including the proper co-ordination with the Roads Section and the Health Section, Administrative Order 115 for 1986 was issued. This laid down conditions for construction of new brick factories in the Al-Qusais area, specifying the styles of building permitted, the materials to be used and the nature of boundary walling for the compounds and also provided for Engineering Consultancy Testing brick specifications in the Building Materials Laboratory offices to be instructed to follow the new rules.

Testing of blocks at the Building Materails Lab

The production of building materials of suitable quality is of high importance, because of its direct relationship with the safety of buildings constructed in Dubai. Bricks are one of the key materials used. Following on from the Administrative Order mentioned above, therefore, Administrative Order No. 111 for 1985 was issued to form a committee of engineers from the Building Section and the Building Materials Laboratory, headed by the Deputy Chief Engineer, with the task of laying down the specifications to be implemented by all brick factories, of spelling out the relevant regulations and of deciding upon the appropriate penalties to be imposed on any violators of these rules.

The Dubai Municipality then turned its attention to refining and expanding the engineering and technical tasks carried out by the Building Section, through the issue of a number of further Administrative Directives.

Administrative Order No. 134 for 1986 was issued to regulate the height of parking shelters and the height of public buildings in the city, in addition to prohibiting the use of car parks for other uses.

Conditions were then put in place to guarantee the safety of the structures of buildings, by providing that the contractor and engineering consultancy offices should share full responsibility for the safety of a building for ten years from the date of its completion. In the event of any evidence of danger to, or being caused by, the building during this period, then a committee was to be formed, headed by the Head of the Building Section, to study the problem and how best to deal with it, under the terms of Administrative Order No. 291 for 1986

Administrative Order No. 215 for 1987 amended the maximum permissible height for public buildings.

In cases where the foundations of buildings when constructed exceeded the boundaries of the plot, extending into adjacent roads, obstruction to excavations related to the laying of utility services could be caused. To deal with this issue, Administrative Order No. 221 for 1987 prohibited such foundations from going beyond plot boundaries, to prevent any possible interference with the public utilities service network.

In order to deal with a need to expand the responsibilities of the Building Licences Committee, Administrative Order No. 22 for 1988 was issued to re-form the Committee and to spell out its duties in terms of auditing, studying suggestions made to it, giving the appropriate opinions and signing Building Licences. In order to update the procedures for the issuing of Trade Licences for engineering consultancy offices and contracting companies, as well as for the renewal or amendment of existing licences, Administrative Order No. 210 was issued for 1988 to set up a committee for this purpose. Comprised of the Head of the Building and Housing Department, the Head of the Planning Department and the Chief Engineer, the tasks of this committee included the receiving and studying of requests for new, amended or renewed licences and the taking of the appropriate decisions.

Following the widespread introduction of metric measurements and the phasing out of using a feet and inches unit of measure in many countries during the 1970s, a need to make a similar change in Dubai was recognised. Memorandum No. 275 from the Municipality Director-General in 1988 provided for a transitional period not exceeding five years during which both metric and imperial measures should be used, followed by use of the metric system alone. This decision was taken following recommendations from the Financial and General Purposes Committees and the Planning Committee.

Developments in the Building Inspection Unit

In 1987 the Building Inspection Unit issued a book entitled ìResponsibilities of Building Inspectorsî in which the development of the Unit up to that time was explained. Key points can be summarised as follows:

Firstly, the responsibilities of the Unit were extended to cover the whole of the Emirate of Dubai, making three sectors, with the addition of the rural sector (outside Dubai and Deira). An employee was designated as being in charge of each sector.

Building Inspection

Secondly, a range of new duties and rules were introduced for the Unit. Among these, it was laid down that the Building Section was not to issue approval for the commencement of construction work until such time as the Dubai Water and Electricity Authority and Etisalat had confirmed, in writing, that there would be no damage caused to cables, pipes and connections for general services as a consequence of the proposed building work.

It was also specified that at each construction site, a sign should be erected giving details of the firms responsible as contractor and consultant, these signs to be removed only upon the issuing of an insurance certificate for the building. A sample was prepared and specifications were laid down for such signs.

Obligations were placed on contractors that they should provide for a drainage of groundwater to a lower level when undertaking construction work and contractors and consultants were made responsible for the provision of the appropriate industrial health and safety measures on site. Finally, they were made responsible for the safe storage of all construction materials, to protect them from damage.

Third: Buildings affected by planning:

Besides its duties and responsibilities related to new buildings, the Section was also made responsible for matters affecting older buildings scheduled for demolition for planning and other reasons. For this purpose, a detailed procedure was laid down, which commenced with a decision being made by the Committee for General Purposes at the Municipality Council on the affected buildings. The Building Inspector is then to send a notification to the owner, requesting him to contact the relevant Sections at the Municipality. Measurements are then taken of each building with a special plan being drawn up, along with a report on their condition.

In accordance with this report, the Compensation Committee then checks the location and evaluates the property after which the due compensation is paid to the owner. A letter is then issued by the Head of the Building and Housing Section to the Dubai Water and Electricity

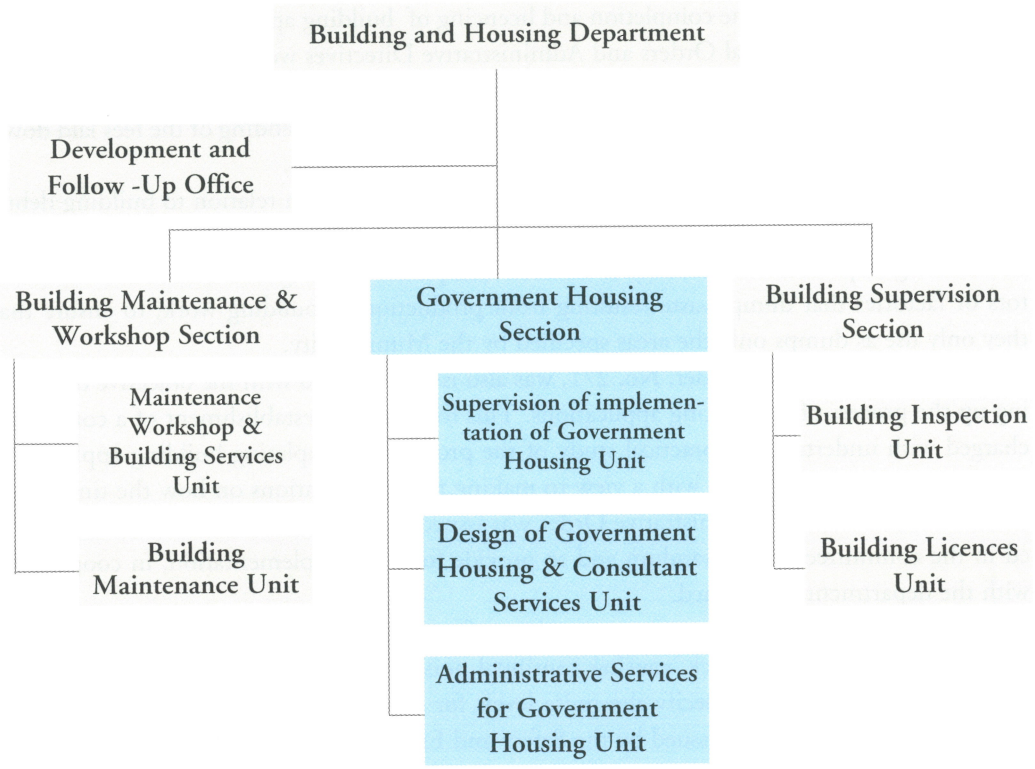
Authority and Etisalat requesting them to cut off their services and to relinquish their responsibilities. If the building is on a main street, where traffic flow can be affected by the process of demolition, then the police and the Roads Section are duly notified to make the necessary arrangements. The Inspector is responsible for ensuring that the correct building is demolished and for making the necessary arrangements with the contractor responsible for the removal of the building debris. Signs are also posted on the boundary walls of buildings due to be demolished.

Amendment of the Organisation Chart

In 1988, studies relating to the reorganisation of Dubai Municipality's structure was completed in respect of the individual sectors and their functional specifications, authorities and responsibilities. In that year, Administrative Order No. 223 was issued, making amendments to the Organisation Chart for the Building Section, through the addition of new authorities, responsibilities and operational functions.

The title Buildings Section was amended to Building and Housing Department, as illustrated in Chart No. 5.

Chart No. 5. Organisation Chart for Building and Housing Department in 1988



Related duties, responsibilities and functions were grouped into Sections, Units and Units.

Issuing of this new Organisation Chart was followed by the issuing of Administrative Order No. 247 for 1988, which re-formed the Building Licences Committee, headed by the Director

of the Building and Housing Department, and specified the weekly meetings of the Committee.

After the new administrative re-organisation in the Building and Housing Department was completed, under the terms of Administrative Order 223 for 1988, it proved necessary to issue a number of other Administrative Orders and internal instructions directed to engineers and inspectors working in the Building Supervision Section with regards to a tightening up of the monitoring and audit process for those projects, so that building rules and regulations were properly enforced.

In 1988 and 1989 several directives were issued to companies involved in the building industry relating to the need for the general appearance of the city to be safeguarded and for adjacent buildings to be protected. These also spelt out the penalties for violations and the importance of keeping to the terms of the licences issued. Building Inspectors were requested to monitor the implementation of these directives during their inspection visits. Directive No. 55 for 1989 also introduced a fixed fee for connecting buildings to the public sewerage system in the Emirate of Dubai.

Important developments since the beginning of the 1990s:

Since 1990, the Emirate of Dubai has seen a rapid growth in construction, as a result of the dramatic economic and commercial development. This has obliged the Buildings and Housing Department to speed up the completion and licencing of building applications. To help in this process, a number of Local Orders and Administrative Directives were issued, as well as internal instructions.

Local Order No. 48 for 1990 covered the enforcing of and the amending of the fees laid down in the 1970 building laws and regulations for the Emirate of Dubai.

In order to safeguard the cleanliness of the city, in particular with relation to building debris and the remains of ready-mixed cement, Administrative Order 251 for 1990 was issued to grant the building inspectors the authority to monitor companies working with cement and contractors or factories that dump waste resulting from production or building work, to ensure that they only use as dumps only the areas specified by the Municipality.

Another Administrative Order, No. 271, was also issued in 1990 with the objective of speeding up the process of completing applications. This followed the establishment of a committee charged with undertaking a practical study of the process of completing building applications and the associated paperwork with a view to making recommendations on how the time taken could be reduced. The Administrative Order was issued to approve the recommendations stated in the committee's memorandum and to provide for their implementation, in cooperation with the departments concerned.

In 1991, steps were taken to act on complaints from the public that contracting companies were working around the clock, causing continual noise from building sites. Local Order No. 61 for 1991 was issued to specify the noise levels for construction work, in accordance with Technical Directive No. 44, issued by the Safety and Environment Protection Section.

Another move, in 1991, was taken to safeguard the public health and the cleanliness of the environment. Administrative Order No. 222 for 1991 was issued to provide directives on the necessity of all buildings being provided with a special location for refuse disposal, so as to facilitate its removal from the building and safe disposal in an appropriate place. The Order laid

down specifications for refuse disposal rooms and for the refuse collection system as well as for a system for the transporting of refuse to the proper containers.

In accordance with recommendations by the Technical Committee that proper studies should be carried out of areas designated for use by companies as housing camps for their labour force, the Building and Housing Department, the Health Department and the Drainage Department were requested to review the construction of and maintenance of housing for labour as well as the presence of the appropriate health and safety procedures for workers living in this type of housing. Administrative Order No. 5 for 1991 was issued to provide for the drafting of a decree on labour camps in the Emirate of Dubai.

Another step taken, under the terms of Administrative Order No. 79 for 1991, was the establishment of a committee to study and evaluate the existing buildings and establishments affected by Dubai Municipality projects, as part of the process for implementing planning projects. The Committee was headed by the Director of Building and Housing, with other members including engineers from that section, while a rapporteur for the Committee was provided by the Compensation Section. The committee was tasked with the preparation of a plan of work for estimating and evaluating such properties and to present this plan for approval.

Following the receipt of a number of comments about projects being carried out by service providers, an internal circular was issued by the Building Inspection Section in May 1991 regarding the assigning of Building Inspectors to the duty of reporting on open Inspection Chambers on the streets belonging to Etisalat.

With a view to providing proper checks on the quality of sand used in ready-mix cement mixers, Administrative Order No. 143 for 1991 was issued laying down regulations on the use of sand which meets the appropriate specifications. The Order also prescribed methods of storing the sand to ensure that it is protected against pollution with salt and provided for the Building Research Section to carry out tests on sand for use in construction, to monitor its quality and to issue the appropriate certificates. The Building and Housing Inspectors and the Building Research and Quality Control Section were given the responsibility for implementing this order and for documenting any violations.

Following recommendations from the Committee for Monitoring Cleanliness and Public Health in 1991, internal directives were issued noting that Building Inspectors must inform contracting companies of the importance of protecting sidewalks during building construction projects by putting up side barriers and horizontal platforms above the sidewalks for pedestrians to walk on as well as protecting pedestrians against any construction material that may fall from above.

Another regulation dealt with advertising boards on tops of buildings, governing their aesthetic appearance as well as laying down health and safety rules. This took the form of a circular issued by the Director of the Building and Housing Department on 27th April 1992, which referred to Administrative Order No. 334 for 1986 regarding the bylaws of Local Order No. 30 for 1986 concerning the monitoring of advertisements in the Emirate of Dubai and to ensure tighter control on them. The circular provided for the commissioning of an engineering consultancy office to prepare a design and plans for these advertisements and rules for the licencing of them, and also spelt out specifications and regulations for such advertising boards.

With extensive dredging and the extraction of sand under way at Jebel Ali, Organisational

Directive No. 1 for 1993, issued by H.H. The Head of the Municipality, gave permission for specified companies to continue work for a period of twelve months only, following which all such work was to cease.

In the same year, Administrative Order 196 for 1993 instructed the Building and Housing Department to implement this Organisational Directive in coordination with the departments concerned.

Development of the Organisation Chart

All of these changes, together with the increasing amount of work being undertaken by the Building and Housing Section, required an amendment of the Organisation Chart for the Section and its various components, as well as of their duties. This was undertaken under the terms of Administrative Order No. 90 for 1994, which made the following changes.

The Building Maintenance and Workshop Section, which had been affiliated to the Building and Housing Section since 1988, was transferred to the General Projects Department.

The Building Licencing Unit was upgraded to become a Section, with two Units, the Architectural Inspection Unit and the Engineering Inspection (Structures) Unit.

A new Building Monitoring Section was established. This had two Units, Licences and Inspection.

An Engineering Supervision Unit and a Safety and Demolition Unit were also established, being affiliated to the Building Monitoring Section, along with the Building Inspection Unit. The Engineering Supervision Unit was created following a recognition that the work of the Building Inspection Unit would be carried out more effectively if it was split into two parts, one to be responsible for regulating building locations and the other to be responsible for engineering and technical aspects. The remaining tasks of the Building Inspection Unit were the regulating of construction sites and their general appearance, labour accommodation on site, ensuring that the relevant documentation relating to the project was available for inspection and generally ensuring adherence to Dubai Municipality rules and laws.

The new Safety and Demolition Unit was given responsibility for arranging for demolition work, through issuing the appropriate tenders, preparing the required reports on dilapidated buildings, abandoned buildings or those affected by planning, issuing Building Demolition Licences for privately-owned buildings, preparing reports on the most suitable methods of demolition, following an inspection of the building concerned, and then supervising the process of demolition to ensure that it was properly carried out.

The Unit was also given responsibility for demolition and removal of building waste for projects carried out by the Municipality and for organising the demolition of buildings affected by city planning projects.

Building and Housing Department and the Organisation Chart for 1994

In 1994 the Building and Housing Department became one of the two administrations under the direct supervision of the Assistant Director-General of Planning and Building Affairs. A new Organisation Chart was then issued, under the terms of Administrative Directive No. 90 for 1994 as shown in Chart No. 6.

Chart No. 6. Organisation Chart for the Building and Housing Department in 1994

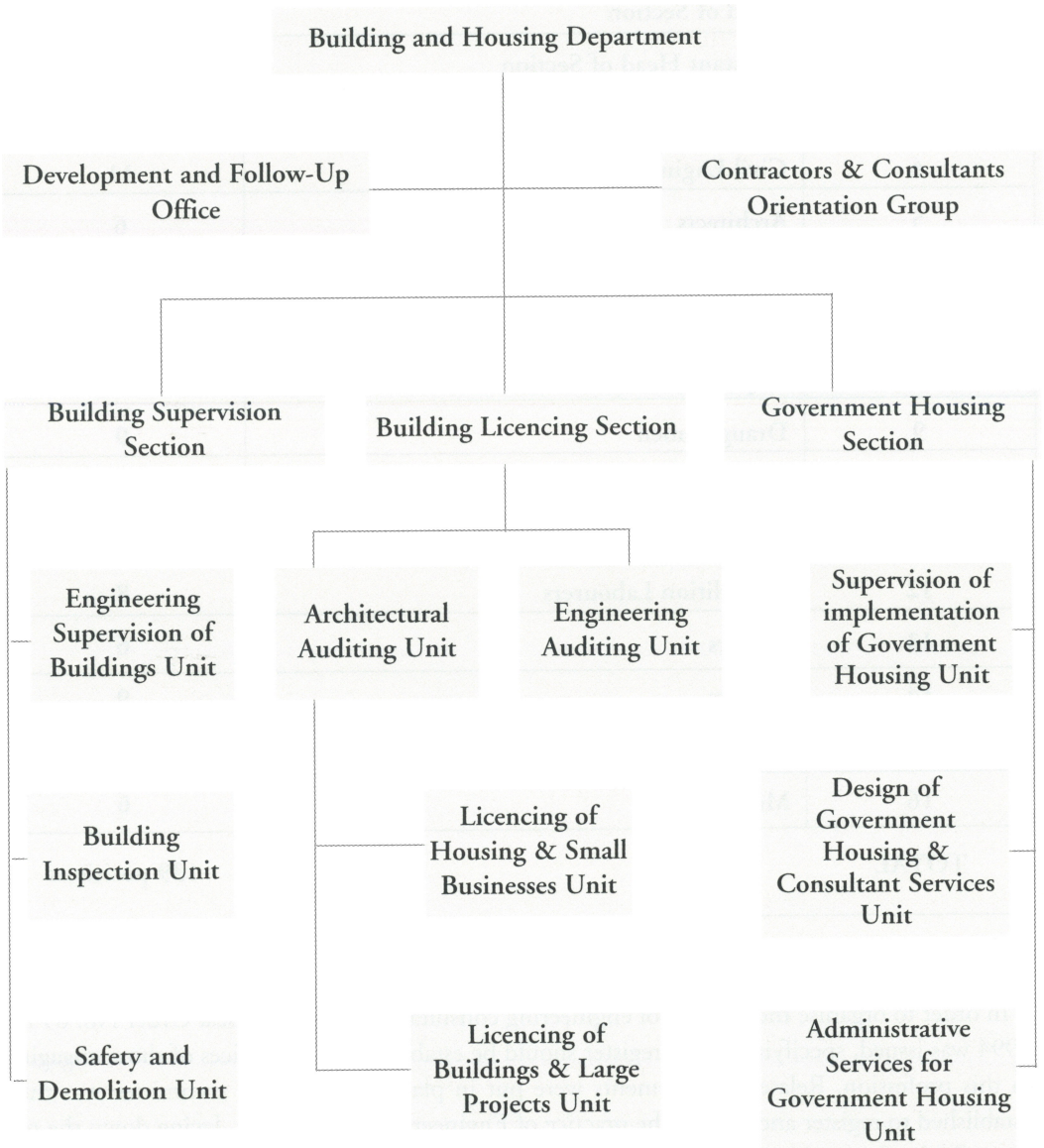


Table No. 1. Number of Employees in Building and Housing Department in 1994

Item	Post	Number
1	Head of Section	3
2	Assistant Head of Section	1
3	Head of Unit	7
4	Civil Engineers	11
5	Architects	6
6	Engineers on the Building Monitoring Committee	3
7	Inspection and Monitoring Engineers	7
8	Inspectors	30
9	Draughtsmen	9
10	Supervisors	2
11	Demolition Supervisors	11
12	Demolition Labourers	8
13	Drivers	6
14	Typists	9
15	Clerks	20
16	Messengers	6
TOTAL		139 positions

Organising the practice of Engineering Consultancy

In order to organise the practice of engineering consultancy activities, Local Order No. 89 for 1994 was issued, specifying that a register should be established of the offices of those engaging in this profession. Related requirements were put in place and a special committee was then established to register and licence the practice of Engineering Consultancy, laying down the relevant fields of expertise and classifications.

Administrative Directive No. 51 for 1998 was issued along with by-laws related to Local Order No. 89 for 1994. These specified the registration procedures and the scope for the practice of engineering consultancy, the procedures for establishing engineering consultancy offices, the renewal of licences, requirements for reclassification and the technical criteria used for evaluations, as well as the nature of qualified engineering personnel required. Examples of an Engineering Consultancy Services Contract and Appointment of Local Services Representative Contract were also produced.

Organising Construction Work

The issuing of procedures related to engineering consultancy was followed by the issuing of Local Order No. 3 for 1999, dealing with the organisation of construction work. This emphasised the necessity for such work to be properly licenced and spelt out the details of the fees charged and other details relating to deposits, fines, the specification of technical and organisational rules for construction work and safety procedures. The obligations and responsibilities of contractors and the rules for the monitoring of the inspection procedures carried out by the administration's inspectors and employees were also specified.

Building Rules and Specifications

Administrative Directive No 125 for 2001 dealt with Building Rules and Specifications Bylaws. These specified the heights of buildings under a system of classifications, room areas, their internal distribution, apertures, balconies, and projecting areas, as well as all matters relating to utilities, services, preventative restrictions, safety, fire safety, plumbing requirements for private buildings and the requirements for drinking water tanks. Conditions relating to refuse rooms and refuse collection areas were also laid down.

Establishment of the Rural Inspection Unit

Until early 1995, the rural areas of the Emirate of Dubai were known as the 'external areas', with one engineer and one inspector being allocated to them. As a result of the dramatic increase in construction work in these areas, these two posts became insufficient to cope with the work. In 1996, therefore, the Building and Housing Department and the Administrative Development Office conducted a joint study of the rural areas. The result was the establishment of the Rural Inspection Group, charged with organising and stepping up the number of buildings inspections in these areas. On 2nd March 1998, an internal circular provided for the beginning of work by the Rural Inspection Group and laid down the allocation of work amongst the engineers and inspectors of the Buildings Inspection Unit. The next year, Administrative Directive No 54 for 1999 established the Rural Inspection Unit within the Building and Housing Department. In March 1999 the Unit moved as a whole to the Municipality's Al-Rashidiya Centre which became the headquarters for this Unit.

The Committee for Evaluation of establishments affected by Municipality Projects

Established by Administrative Order No. 79 for 1991, this committee continued to meet regularly to evaluate projects. The procedures followed entailed the relevant area inspector in the Building Monitoring Section making a drawing of the location, marking clearly the affected area. The relevant building plans were then obtained from the Municipality's archive, followed by a field trip by the committee members to the affected location. A technical report was then prepared, including the structural condition of the building. Based upon the reports of the Building Inspector and the Evaluation Committee, as well as the plans and documents available, the committee then meets to prepare its evaluation.

Following the carrying out of a general study of its work, the Evaluation Committee prepared a manual on Compensation Procedures for Buildings Affected by Planning Projects. This was approved by Administrative Directive No. 910 for 1997.

This was followed by Administrative Directive No. 1477 for 1997, which gave the committee per-

manent status, as the "Committee for the Evaluation of Establishments Affected by the Municipality's Projects." This had five permanent members, four from the Building and Housing Department and the fifth, the rapporteur, from the Compensations Section.

This Directive specified the duties of the committee as being to study and evaluate the requests for compensation related to establishments, buildings and farms affected by the Municipality's projects, and to propose the appropriate compensation value, taking into consideration the location and the general structural state of each building.

Establishment of the Contractors and Consultants Orientation Office

This group commenced its duties under the name "Contractors and Consultants Orientation Group" in accordance with Administrative Directive No. 90 for 1994. It was renamed, in accordance with Administrative Directive No. 288 for 1999, as the "Contractors and Consultants Orientation Office".

The main responsibilities and duties of the Building and Housing Department and its affiliated Sections

The key task of the Department and its Sections is to ensure adherence to building regulations and to the required safety specifications within the Emirate of Dubai, as well as offering government assistance in the field of general housing, according to the relevant directives. It is also responsible for the evaluation and classification of licenced consultants and contractors.

Government Housing Section

The duties of this Section include:

- Receipt, documentation and sorting of applications for government housing, land requests and the effective supervision and monitoring of the implementation of government housing.

Government Housing

- Preparation of regular studies on housing conditions in the Emirate of Dubai and to suggest suitable procedures for remedying any problems.
- Offering advice and information to the public regarding housing design and construction.
- Revising plans presented by consultancy offices for the construction of government housing in addition to supervising the approved plans and carrying out the required maintenance for government housing.

Building Inspection Section

The duties of this Section include:

- Undertaking systematic inspection of projects implemented within the Emirate to ensure that they are carried out in accordance with the approved building licences as well as enforcing the rules and regulations pertaining to them, to ensure the projects abide by the related laws and legislation.
- Monitoring the labourers within the building industry to ensure they have valid permits.
- Issuing of Completion of Building Certificates.

Building Regulations and Licencing Section

The duties of this Section include:

- Issuing of Building permits after an architectural and structural audit of the plans.
- Ensuring that the Municipality's Organisational Unit requirements and those of the Local Offices, private establishments and public establishments within the Emirate are enforced.

Building and Housing Department and e-government

The Building and Housing Department has used computers to issue building licences and papers related to insurance deposits since 1991. The use of computers was gradually expanded to include the issue of Certificates of Completion, Building Inspection Committee procedures and statistical work relating to activities carried out by the Sections within the Department.

By 2000, the Building and Housing Department had made major progress in its use of computer technology, this being regularly updated, and had extended its use to cover the three sections within the department: Building Inspection, Building Licencing and Government Housing.

In 2000, the Contractors and Consultants Qualifying Office within the Building and Housing Department began computerised testing of all the required technical staff needed by contracting companies and engineering consultancy offices.

The Office also updated all the documentation relating to contractors and consultants on computer to be used as a reference for applicants who do not have access to these technical services. Files are updated without referral to hard copies, thereby reducing the percentage of referral to hard-copy files by 15% by the end of 2000.

In order to promote knowledge of building laws, regulations and contracts within the industry, and more widely, as appropriate, the Building and Housing Department in 2001 issued Circular No. 110 to all consultancy offices and contracting companies in the Emirate of Dubai giving details of all the services offered through the Internet.

TABLE 2: Employee details within the Building and Housing Department in 2002

Item	Job Title	Number of employees within the Department & its Sections					Total
		Department Office	Building Inspection Section	Building Licence Section	Government Housing Section	Orientation Office	
1	Department Director	1	-	-	-	-	1
2	Assistant Department Director	1	-	-	-	-	1
3	Head of Section	-	1	1	1	-	3
4	Head of Unit	-	3	3	4	-	10
5	Head of Unit	-	-	-	-	1	1
6	Specialist	-	-	1	-	-	1
7	Architect	-	1	7	7	2	17
8	Civil Engineer	-	6	5	2	-	13
9	Services and Safety Engineer	-	3	-	9	-	12
10	Other Specialities	-	1	4	1	-	6
11	Follow-up Engineer	1	-	-	-	-	1
12	Trainee Engineer	-	2	3	-	-	5
13	Assistant Engineer	-	-	1	1	-	2
14	System Analyst	1	-	-	-	-	1
15	Technical Coordinator	-	1	-	-	-	1
16	Social Researcher	-	-	-	2	-	2
17	Administrative Officer	1	-	-	-	-	1
18	Assistant Administrative Officer	-	2	-	3	-	5
19	Inspector	-	39	7	9	-	55
20	Trainee Inspector	-	5	-	-	-	5
21	Draughtsman	-	1	7	8	-	16
22	Secretary	2	1	1	1	-	5
23	Administrative Support (Clerk) & Typist	1	10	14	9	1	35
24	Driver	-	7	-	2	-	9
25	Technical Labourer	-	2	-	1	-	3
26	Labourer	-	8	-	-	-	8
27	Messenger	1	2	2	4	1	10
	Total	9	95	56	64	5	229

TABLE 3 : The number of employees in the Building and Housing Department, 1985 – 2002

Year	Number of Emiratis	Number of Expatriates	Total
1985	12	83	95
1986	15	88	103
1987	15	93	108
1988	20	93	113
1989	22	109	131
1990	24	108	132
1991	28	108	136
1992	30	104	134
1993	34	106	140
1994	35	104	139
1995	36	105	141
1996	40	111	151
1997	43	120	163
1998	46	122	168
1999	49	136	185
2000	56	146	202
2001	62	152	214
2002	78	151	229

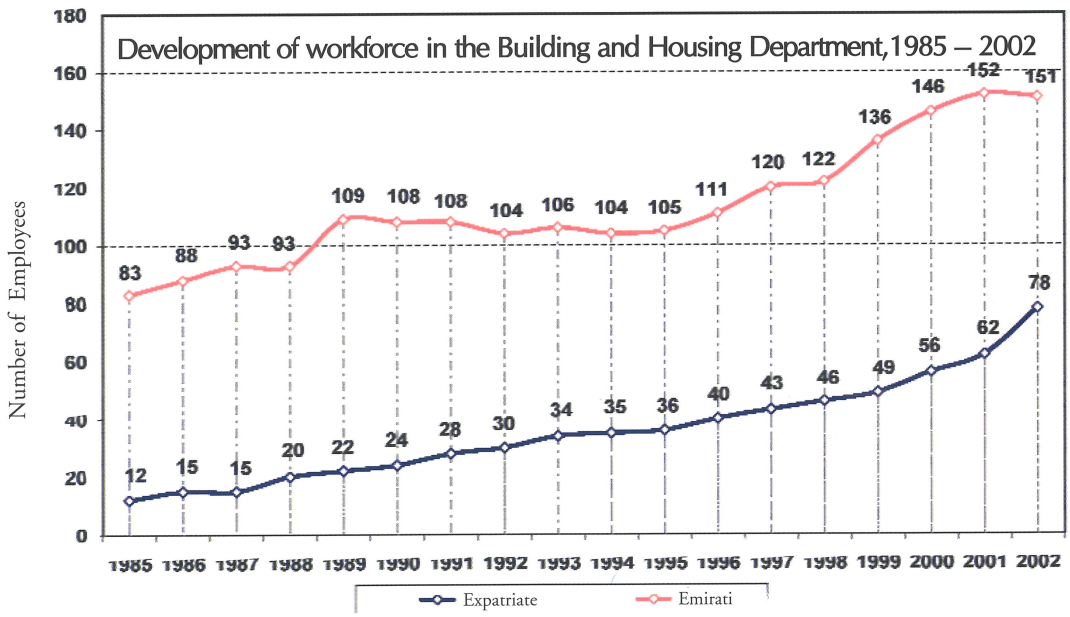


TABLE 4: Total expenditure and revenues for the Building and Housing Department including projects, 1988 – 2002

Year	Expenditure (in dirhams)	Revenue (in dirhams)
1988	5,656,265.00	1,404,045.00
1989	6,427,951.00	2,320,087.00
1990	13,343,611.00	3,007,615.00
1991	11,561,865.00	3,736,105.00
1992	9,126,583.00	6,237,340.00
1993	9,834,149.00	8,567,921.00
1994	23,376,911.00	13,056,459.00
1995	20,884,033.00	9,990,490.00
1996	23,464,747.00	12,096,556.00
1997	25,571,257.00	14,927,210.50
1998	66,031,554.96	17,865,667.50
1999	118,737,462.38	15,804,236.00
2000	124,903,823.37	14,921,659.35
2001	101,921,364.89	17,601,616.06
2002	97,335,854.00	22,392,810.00
Total	658,177,432.00	163,929,817.30

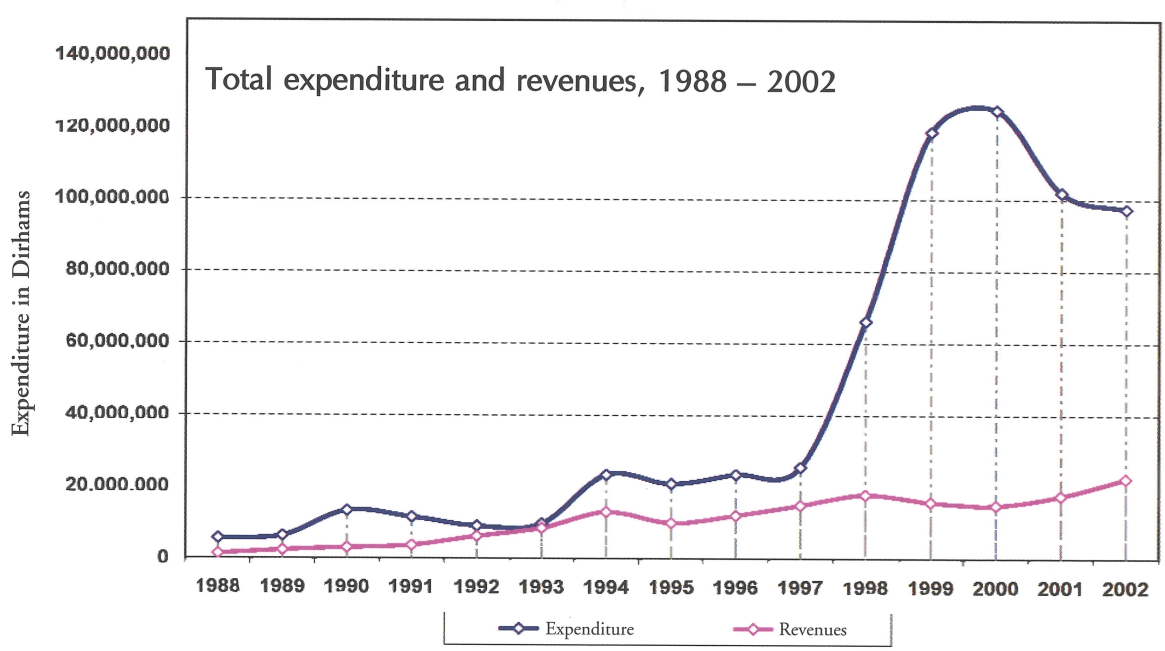


TABLE 5: Total Revenues for the Building and Housing Department, by Section, 1988 – 2002 (in dirhams)

Year	Total Revenue for Building & Housing - Administration	Total Revenue for Government Housing	Total Revenue for Building Inspection Section	Total Revenue for Building Regulations & Licence Section	Total Revenue for Building & Housing Department
1988	0	0	0	1,404,045	1,404,045
1989	0	0	0	2,320,087	2,320,087
1990	0	0	0	3,007,615	3,007,615
1991	0	0	134,383	3,601,722	3,736,105
1992	0	0	0	6,237,340	6,237,340
1993	0	0	239,221	8,328,700	8,567,921
1994	0	0	0	13,056,459	13,056,459
1995	133,547	0	1,210,829	8,646,114	9,990,490
1996	103,027	0	2,224,865	9,768,664	12,096,556
1997	2,300	0	1,591,962	13,332,949	14,927,211
1998	525,835	12,500	1,983,469	15,343,863	17,865,668
1999	577,995	32,900	1,829,339	13,364,002	15,804,236
2000	399,660	38,800	2,421,843	12,061,357	14,921,659
2001	459,580	162,699	3,114,698	13,864,639	17,601,616
2002	494,660	317,220	3,751,401	17,829,530	22,392,811
Total	2,696,604	564,119	18,502,009	142,167,085	163,929,818

Total revenues for the Building and Housing Department, by Section, 1988 – 2002

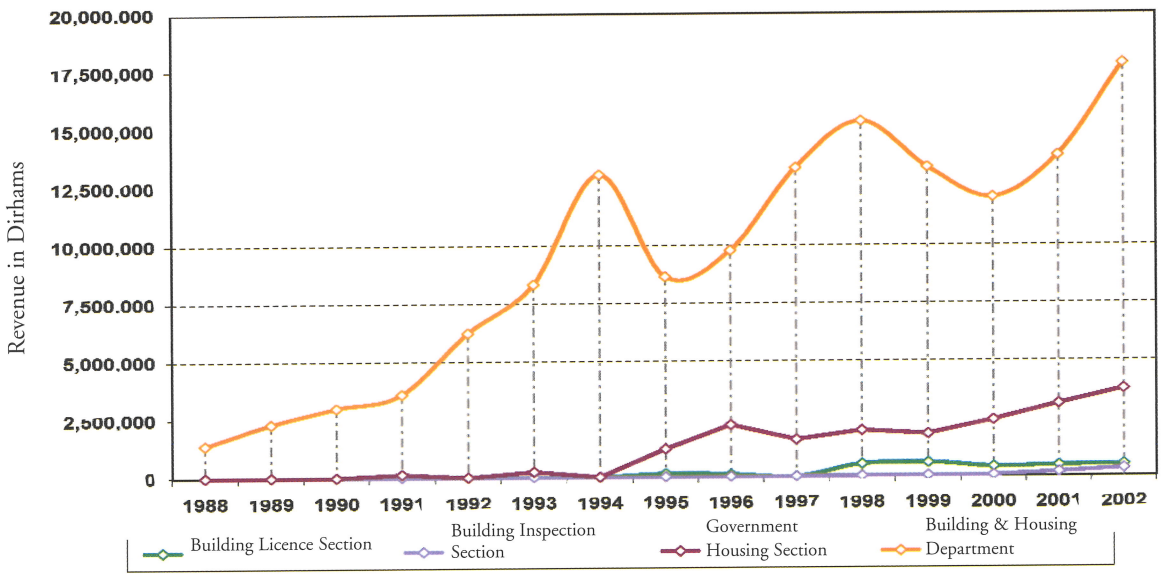


TABLE 6: Total Expenditure for the Building and Housing Department, by Section, 1988 – 2002 (in dirhams)

Year	Building & Housing - Administration	Government Housing Section	Building Inspection Section	Building Regulations & Licence Section
1988	5,036,987	619,278	0	0
1989	5,846,595	581,356	0	0
1990	13,343,611	0	0	0
1991	1,015,243	3,187,176	4,244,364	0
1992	880,876	3,157,099	4,242,232	0
1993	1,024,809	3,575,347	4,948,639	0
1994	810,039	3,529,889	5,021,888	1,028,742
1995	1,075,056	3,557,557	4,422,675	2,339,033
1996	779,811	3,706,465	6,157,415	2,899,986
1997	989,890	4,075,350	6,437,481	2,882,829
1998	1,213,318	51,913,255	7,199,544	2,895,238
1999	1,207,401	51,754,383	6,778,497	2,847,165
2000	1,660,524	53,272,525	7,934,554	3,414,163
2001	2,146,650	57,126,906	9,001,484	4,235,612
2002	2,011,525	42,362,994	10,717,121	5,290,279
Total	39,042,336	282,419,580	77,105,894	27,833,048

Total expenditure for the Building and Housing Department, by Section, 1988 – 2002

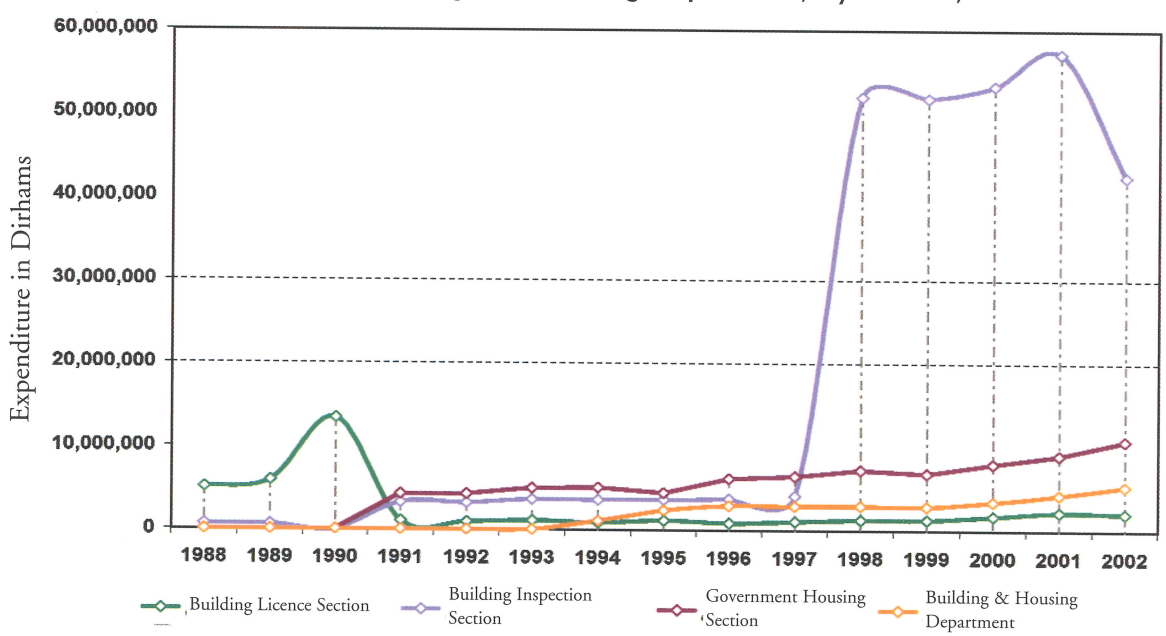


TABLE 7: Activities of the Building Inspection Section, 1977 – 2002

Year	Certificates of Completion	Deposits	Decoration & Annexes Licences	Disputes	Structural Audits
1977	850	800	900	50	1,000
1978	600	1,135	950	40	889
1979	634	117	736	75	792
1980	536	1,539	1,113	47	644
1981	700	1,000	2,200	70	710
1982	1,195	1,060	2,193	35	1,390
1983	1,484	1,669	2,355	102	2,841
1984	1,446	3,348	1,846	85	2,680
1985	982	1,604	1,738	90	2,732
1986	1,119	1,875	1,978	65	2,569
1987	947	1,950	2,200	50	2,637
1988	829	2,124	3,008	60	2,957
1989	896	1,587	2,930	107	6,531
1990	848	1,624	1,574	90	6,468
1991	817	1,963	2,031	108	5,168
1992	661	2,082	2,015	72	5,943
1993	760	2,027	1,487	93	7,986
1994*	1,017	2,051	1,182	113	10,342
1995	1,226	2,045	1,067	110	10,293
1996	1,169	2,184	848	65	7,971
1997	2,936	2,093	3,617	74	9,606
1998	1,683	3,097	4,859	111	11,208
1999	1,818	3,345	3,479	84	11,985
2000	1,919	3,530	4,003	108	14,124
2001	2,497	2,621	3,358	96	13,038
2002	2,259	3,660	4,336	155	15,621
TOTAL	31,828	52,130	58,003	2,155	158,125

* The Building Licence Section became responsible for issuing Decoration and Annexes Licences in 1994.

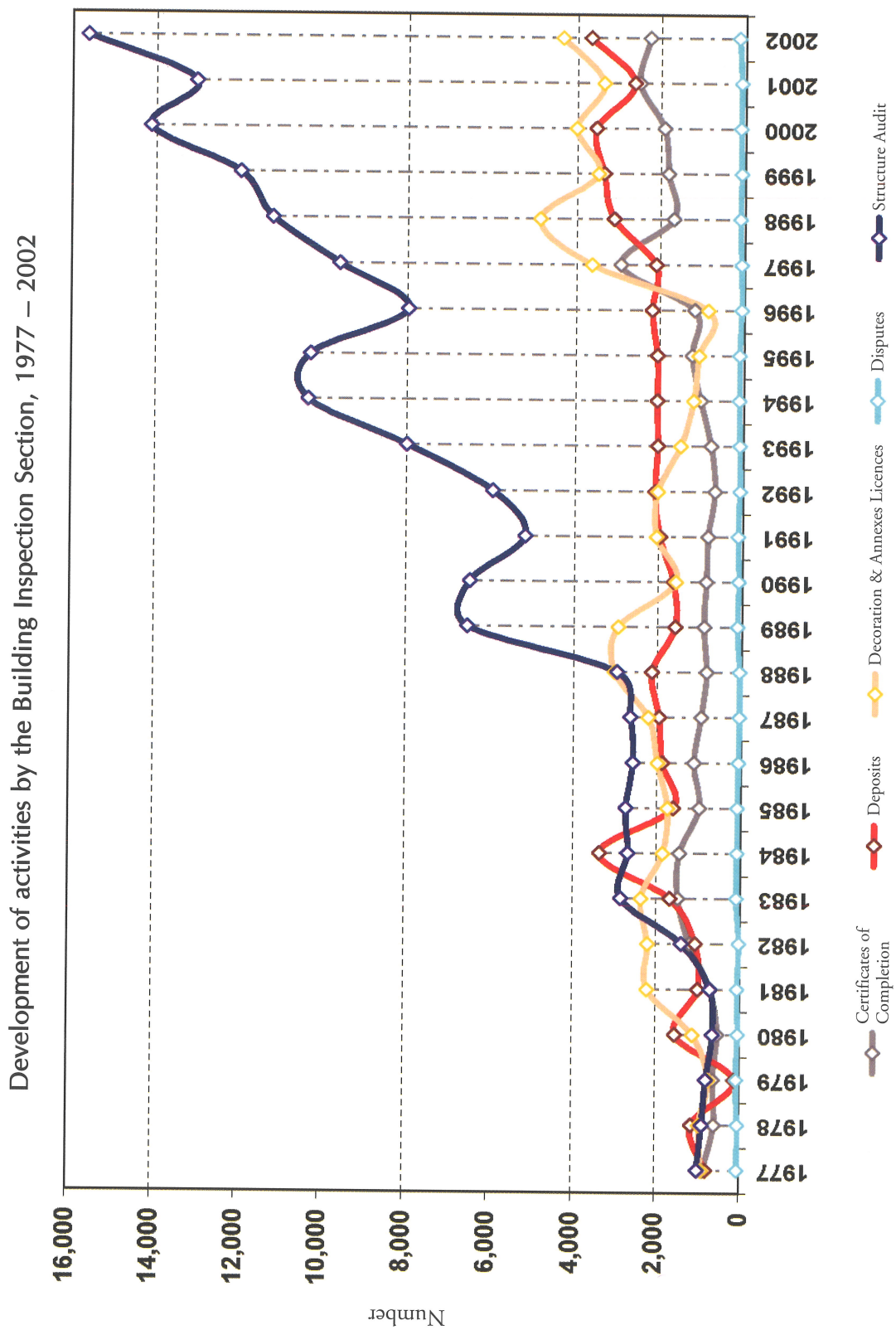
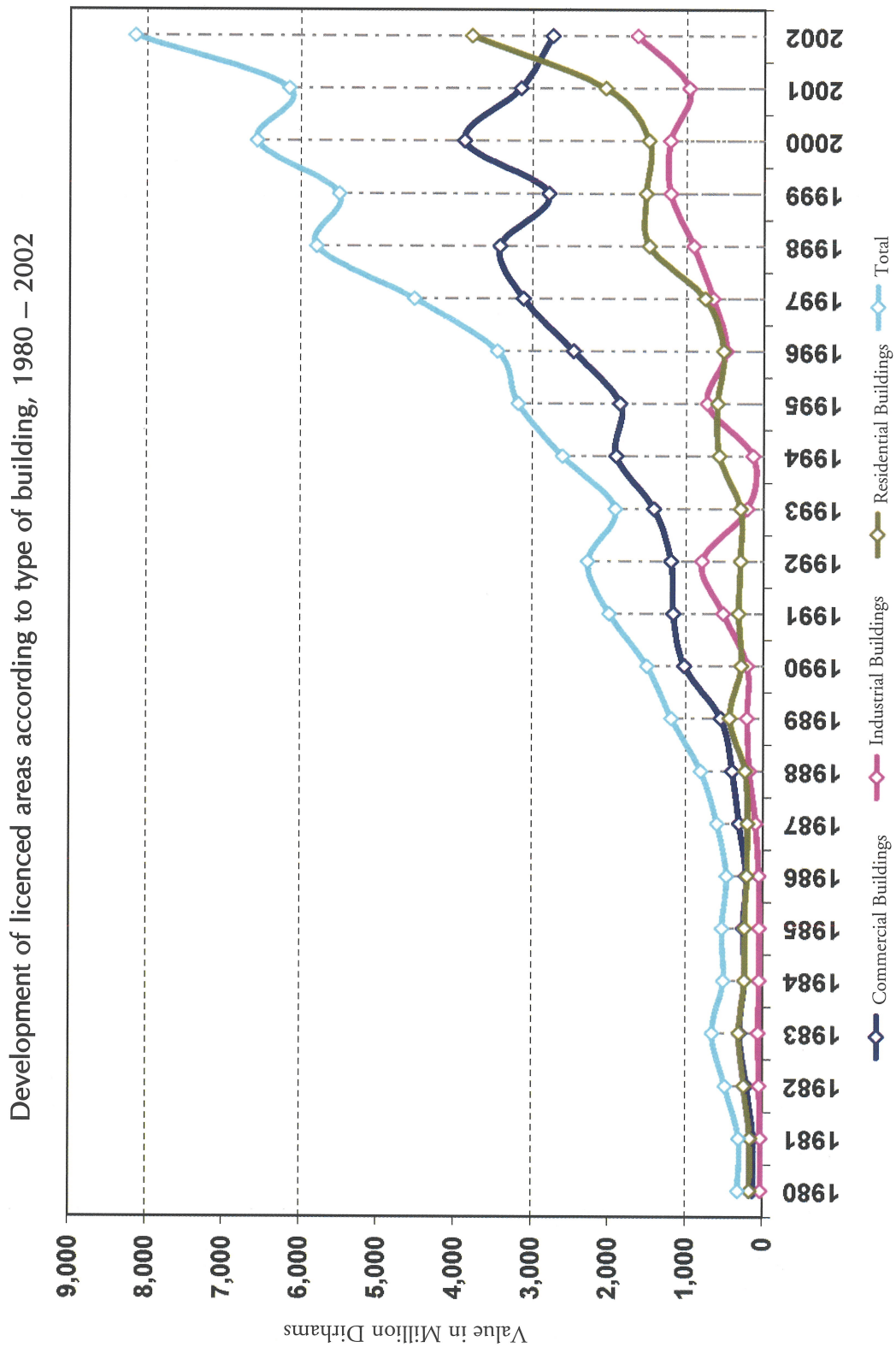

Development of activities by the Building Inspection Section, 1977 – 2002
Number
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
Certificates of Completion
Deposits
Decoration & Annexes Licences
Disputes
Structure Audit

TABLE 8: Activities of the Building Regulations and Licence Section, 1980 – 2002

Year	Value in Million Dirhams			Value in Millions of Dirhams	Development of areas in square feet			Total area in square feet
	Investment Buildings	Industrial Buildings	Residential Buildings		Investment Buildings	Industrial Buildings	Residential Buildings	
1980	127	25	165	317	508,746	101,749	661,370	1,271,865
1981	122	24	159	305	467,619	93,524	607,905	1,169,048
1982	204	39	242	485	812,590	154,779	967,369	1,934,738
1983	292	52	305	650	1,124,354	199,885	1,174,325	2,498,565
1984	233	41	233	507	897,447	156,078	897,447	1,950,971
1985	249	43	234	526	906,397	173,565	848,542	1,928,504
1986	216	50	202	468	795,372	190,198	743,500	1,729,070
1987	304	92	197	593	1,159,071	363,630	749,987	2,272,688
1988	394	175	229	799	1,803,268	793,438	1,009,830	3,606,536
1989	547	205	433	1,184	3,339,816	1,071,262	1,890,462	6,301,539
1990	1,017	204	281	1,503	4,839,849	1,011,312	1,372,495	7,223,656
1991	1,161	516	318	1,994	5,864,735	2,629,019	1,617,858	10,111,611
1992	1,191	787	293	2,271	8,656,154	5,826,258	2,164,039	16,646,450
1993	1,413	203	296	1,913	17,856,487	2,690,703	3,913,751	24,460,941
1994	1,900	132	569	2,601	26,384,832	4,656,147	7,760,245	38,801,223
1995	1,856	727	595	3,178	15,824,177	6,275,105	5,183,782	27,283,064
1996	2,457	476	515	3,448	19,922,075	3,928,297	4,208,889	28,059,261
1997	3,114	655	755	4,524	28,040,746	5,689,427	6,908,590	40,638,763
1998	3,415	902	1,478	5,795	27,316,887	6,829,222	11,382,036	45,528,146
1999	2,781	1,200	1,519	5,500	20,796,808	9,150,596	11,646,213	41,593,617
2000	3,880	1,208	1,482	6,570	20,875,462	6,262,639	7,654,336	34,792,437
2001	3,146	961	2,044	6,152	19,264,254	7,005,183	8,756,479	35,025,917
2002	2,737	1,635	3,780	8,152	16,791,741	11,934,503	16,224,633	44,950,877
Total	32.7 Billion	10.3 Billion	16.3 Billion	59.35 Billion	244.3 Million	77.2 Million	98.3 Million	419.8 Million


Development of licenced areas according to type of building, 1980 – 2002
Value in Million Dirhams
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
Commercial Buildings
Industrial Buildings
Residential Buildings
Total

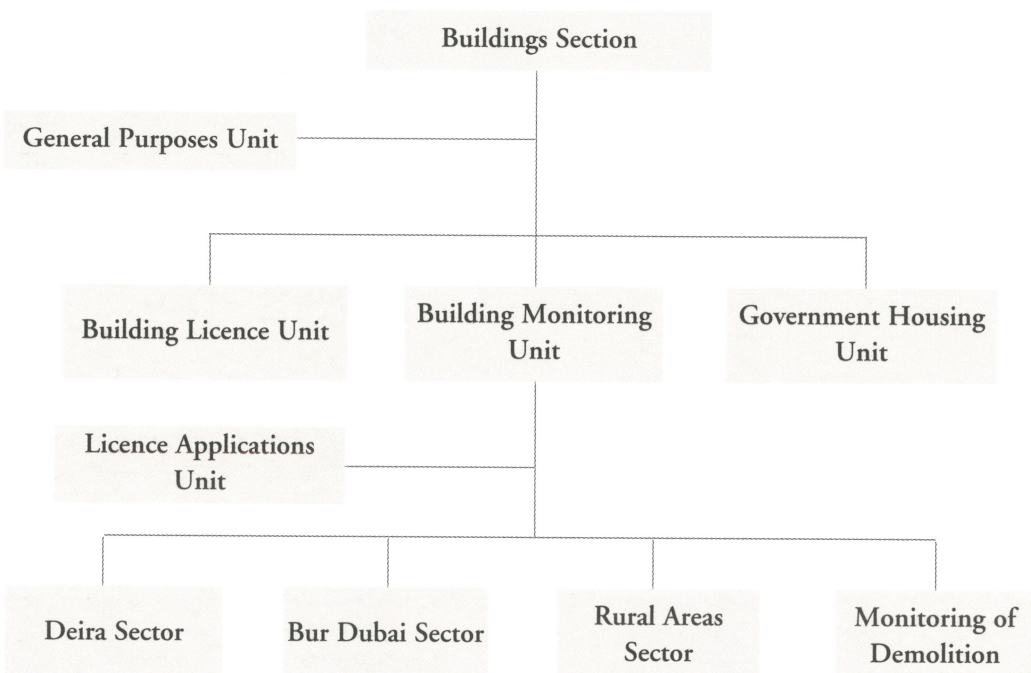
Government Housing Section

During the nineteen seventies, the Government of Dubai attached considerable priority to a wide-ranging policy designed to help UAE citizens of limited incomes, to help them achieve their aspirations for advancement. Part of this policy was a programme to provide them with suitable housing.

This was carried out through the distribution of plots of land, public housing and financial aid to facilitate the construction of new buildings and the extending of existing ones. Until 1980, this programme was administered through the Office of H.H. The Ruler of Dubai, which was responsible not only for building homes for the public, but also for providing all necessary services such as roads, sewage and lighting.

In that year, however, an order was issued to establish a Government Housing Section within the framework of the Dubai Municipality. Initially, the Administration of the new section was handled by the Execution Section of the Municipality Council's Administration, then being transferred to the Buildings Section at the beginning of 1983, as shown in Figure 7, below:

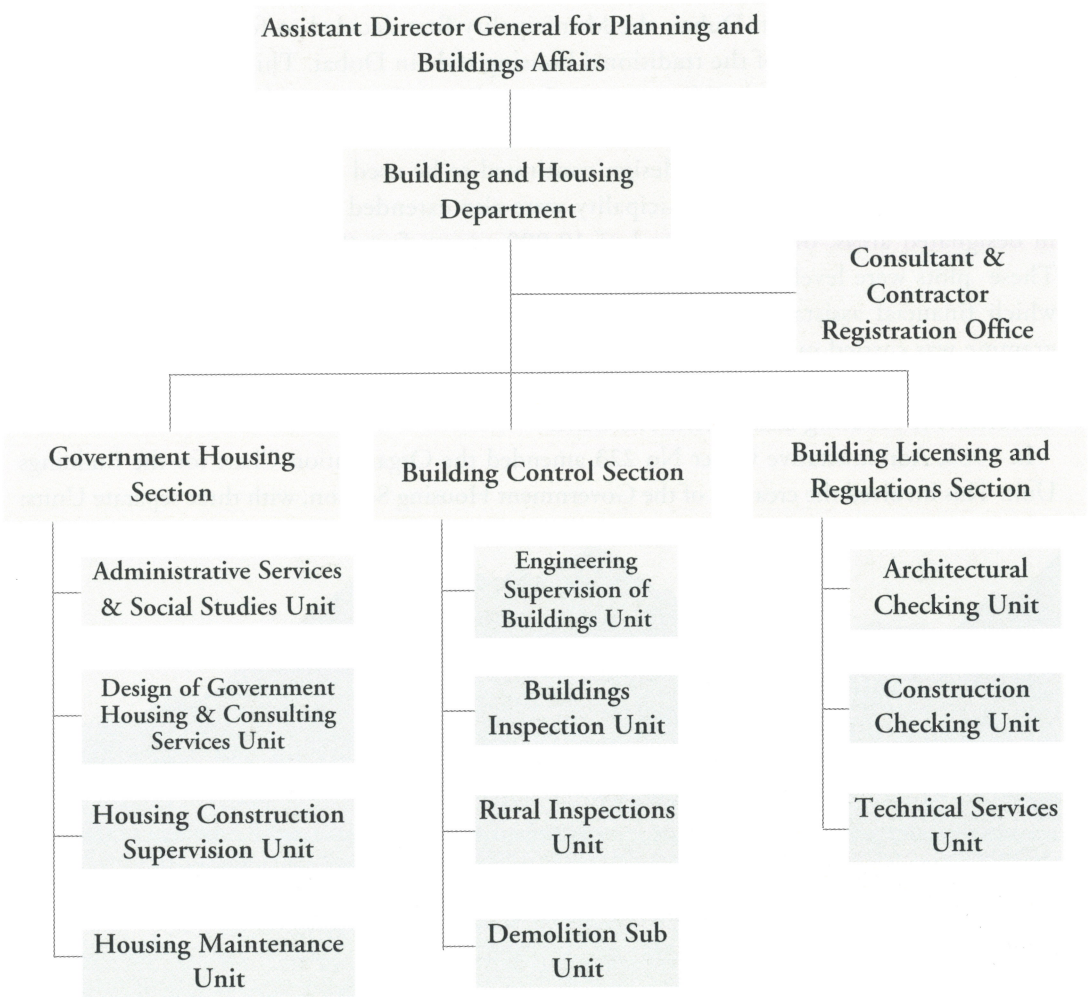
Illustration No. 7: Organisation Chart for the Buildings Section in 1983



Development of the Organisation Chart:

In order to take account of changes in the various duties and responsibilities of the individual sections, Units and units for Building and Housing Department since 1994, Administrative Decision No 288 in 1999 laid down the framework for a new organisation chart for the Building and Housing Department as shown in Figure No.8.

Illustration No. 8: Organisation Chart for the Building and Housing Administration 1999



Development of Government Housing services

After the Government Housing Section was created within Dubai Municipality in 1980, it assumed the task, from 1980-1083, of overseeing the distribution of grants made by the General Purposes Committee of the Municipality Council. Most of these were to finance the extension of popular housing, and were for amounts ranging between Dh 100,000 and Dh 150,000.

In 1983, the Municipality decided to provide further assistance through the offering of free engineering and architectural assistance and Administrative Order no. 86 was issued, appointing an engineer as Deputy Head of Buildings Unit for Popular Housing and Extensions and placing this person in charge of designing and supervising construction of popular homes and extensions. This arrangement proved effective, as the Unit was there-

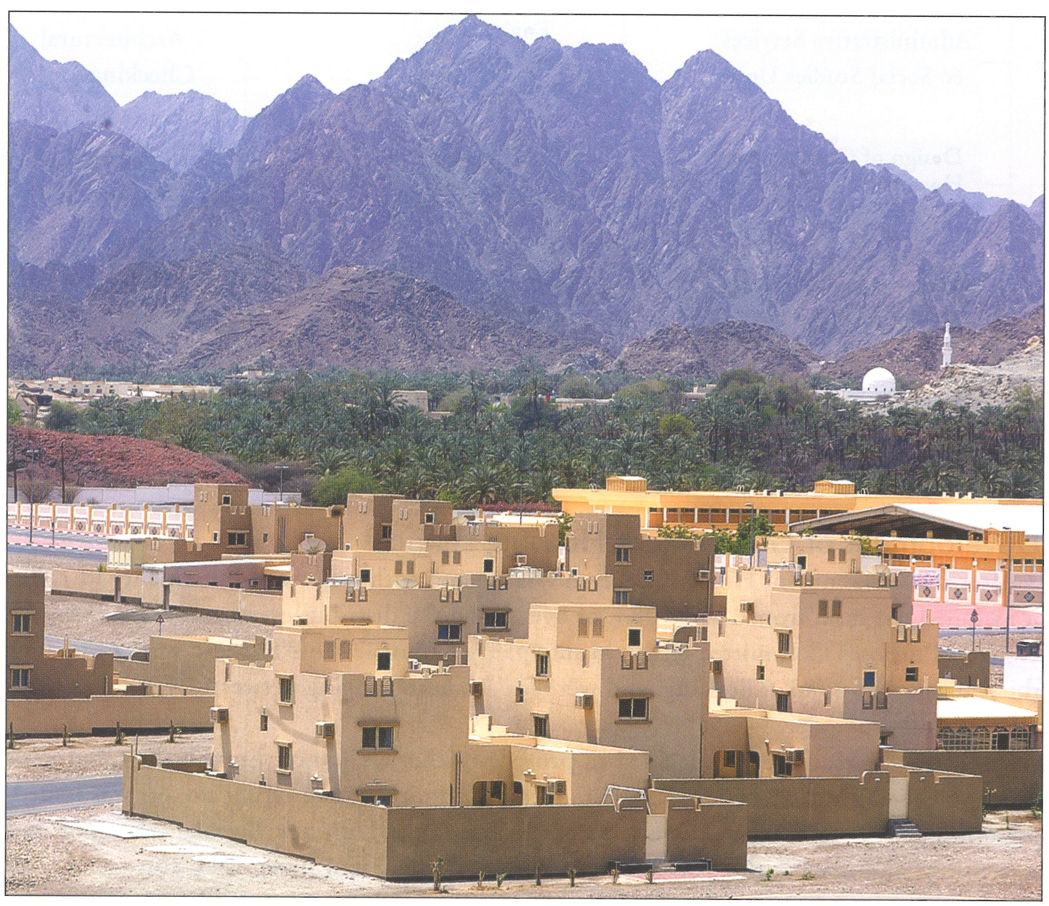
by clearly identified as being responsible for implementation of Government policies on housing in general, as well as its development and improvement.

In accordance with instructions from Government to devise the best possible housing policy for UAE citizens in Dubai, the Municipality first decided to focus on the development and improvement of the traditional housing style in Dubai. This was based on houses with relative narrow buildings around an internal courtyard, to ensure privacy. Covering an area of 2,500 square feet (232 square metres), and providing all necessary internal facilities, this improved design continued to be used until 1984.

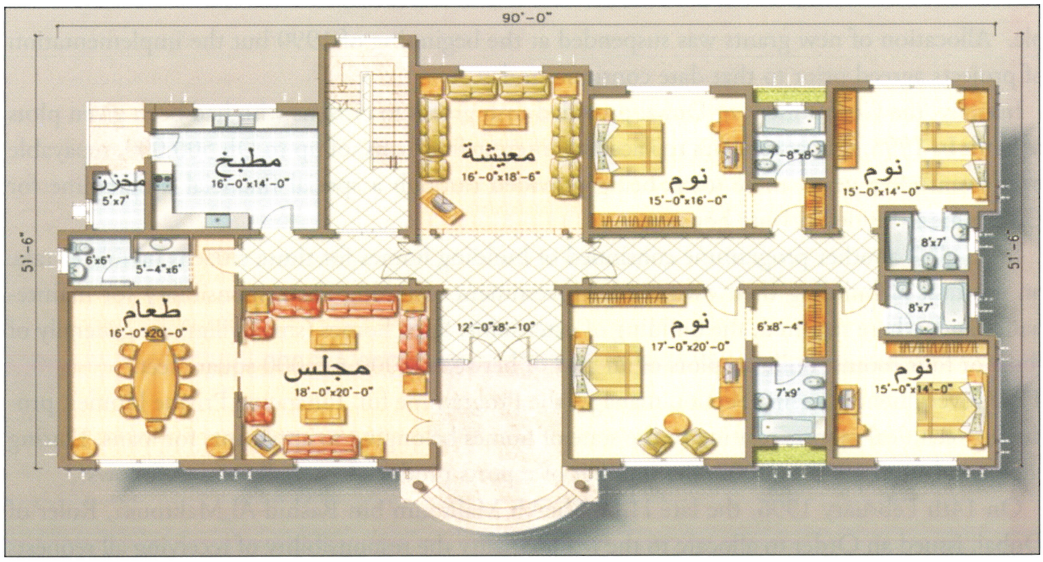
Services performed by the Municipality were also extended to the provision to citizens, in designated areas, of plots of land of 10,000 square feet (929 square metres) in size. These plots were levelled and connected to the necessary utilities and services, following which financial assistance of around Dh 200,000 per person was provided. This programme was carried out during the years 1981-1984.

In 1984, Administrative Order 474 was issued, specifying the responsibilities of the Government Housing and Extensions Unit.

In 1988, Administrative Order No 223 amended the Organisation Chart for the Buildings Unit. This involved the creation of the Government Housing Section, with three separate Units:



Popular houses in the inland village of Hatta



Architect's design for a government style house

- One responsible for implementing the tasks of the Government Houses Unit.
- One for Design of Government Housing and Consulting Services.
- One for Administrative Services.

The main duties of the Section were defined as follows:

1) To accept applications from citizens related to housing, such as for popular houses, and empty residential land or for grants to assist in building or for maintenance, extensions and replacement, in addition to the preparation of social studies and surveys.

2) To prepare architectural and construction designs suitable for homes in accordance with the citizens' wishes, their needs and modern trends, taking into account local traditions and cultural requirements, and to provide other assistance such as provision of consultancy services, technical services and agreements with contractors, up to the date of delivery of the completed building to its owner.

3) To implement and oversee the construction of homes and other buildings, under the direct supervision of the Government Housing Section, and to supervise the construction of new residential compounds in both urban and rural areas, within the framework of an overall plan to upgrade the housing stock of the Emirate and to provide new dwellings to deserving citizens.

In 1989, the area of land provided for housing grants was increased to fifteen thousand square feet (1,393 square metres) and the ceiling for financial assistance was also raised, to Dh 250,000. At the time, this amount was sufficient for the construction of a three bedroom house with an extension (consisting of a sitting room, kitchen and bathroom) in addition to a perimeter wall. Such a size was appropriate for the needs of a medium-size family consisting of five to seven peo-

ple. Allocation of new grants was suspended at the beginning of 1990 but the implementation of projects agreed prior to that date continues today.

Initially, the Government of Dubai provided cash grants to citizens who had been given plots of land. In 1993, this system was replaced by interest-free loans, of up to Dh 500,000, repayable over twenty-five years, these loans being provided through a special financial programme for Government-funded private housing.

In parallel, another programme continued of building homes for those citizens unable to take on the task of building their own, with Government assuming the responsibility for maintenance and, where required, the building of extensions. Such homes (small villas) are generally of three or four rooms, built on plots of an area of between 3,000 ñ 5,000 square feet.

The Government Housing Section manages the Programme for Financing Private Homes, producing technical reports relating to the state of homes belonging to applicants for loans. During the period from 1993 to 2002, the number of reports produced annually was as follows:

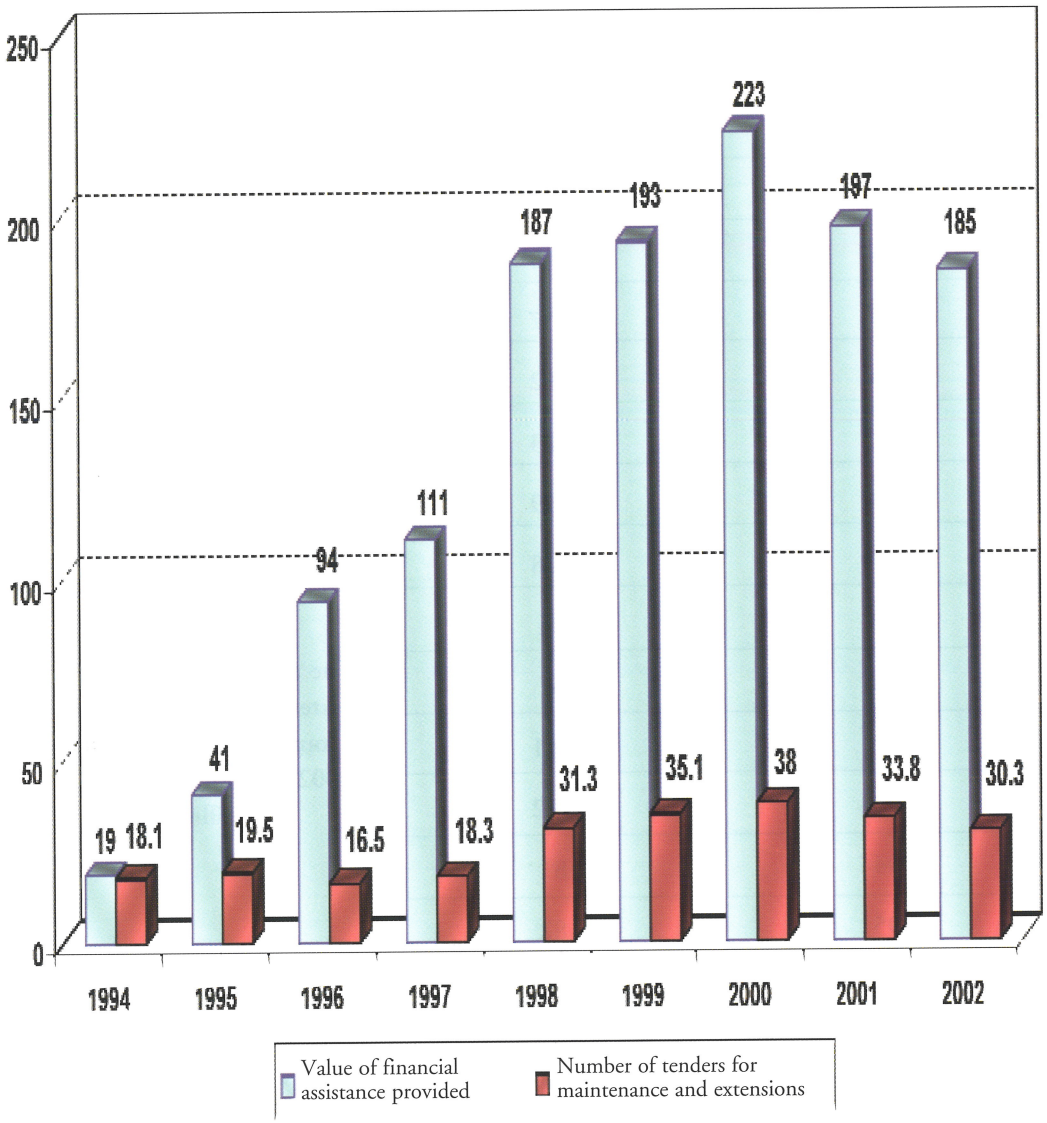
On 14th February 1996, the late H.H. Sheikh Maktoum bin Rashid Al Maktoum, Ruler of Dubai, issued an Order to allocate to the Municipality the responsibility of receiving all requests

Year	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
No. of reports	1048	104	354	206	140	150	40	146	18	63

Table No.1. Details of the financial assistance provided for maintenance and simple extensions from 1994 until the end of 2002.

Year	Number of occasions on which assistance was provided for maintenance & extensions	Value of financial assistance provided (in dirhams)
1994	19	18,128,000
1995	4	19,525,000
1996	94	16,542,000
1997	111	18,338,000
1998	187	31,333,000
1999	193	35,121,000
2000	223	37,967,000
2001	197	33,744,000
2002	185	30,350,000
TOTAL	1,250	241,048,000

Development of financial assistance for maintenance and extensions between 1994 up to end of 2002



for maintenance and extensions for these houses listed in the annual Municipality budget, setting a maximum amount of Dh 200,000 per house, whether for maintenance, an extension or both.. The Director General of the Municipality was given authority to approve additional sums for exceptional cases.

This was followed by Administrative Order No. 308, issued by the Director General of the Municipality, to lay down the conditions and requirements relating to the grants for home maintenance.

Table No. 2. Occasions on which financial assistance was provided for large-scale extensions between 1981 – 2002.

Year	Number of Projects	Comments
1981	137	The total cost of large-scale extension projects carried out between 1981 and 2002 amounted to Dh 719 million.
1982	246	
1983	231	
1984	340	
1985	357	
1986	362	
1987	403	
1988	299	
1989	168	
1990	84	
1991	67	
1992	141	
1993	172	
1994	81	
1995	82	
1996	30	
1997	24	
1998	33	
1999	20	
2000	14	
2001	8	
2002	2	
TOTAL	3,301	

Table No 3: Major Government Housing projects

Serial No.	Project	Project Cost in Millions of Dirhams	Stage of implementation
1	24 homes in Hatta	16.9	Completed in 1985
2	88 homes in Hatta	50.4	Completed in 1999
3	20 homes in Al Quoz	6.8	Completed in 1999
4	20 homes in Qusais	6.8	Completed in 1999
5	39 homes in Zabeel	41.0	Completed in 2000
6	26 home in Jumaira	28.2	Completed in 2000
7	50 homes in Al Quoz	15.8	Completed in 2000
8	8 homes in Hatta	5.719	Completed in 2000
9	30 homes in Zabeel	15.5	Completed in 2000
10	45 homes in Hatta	23.7	Completed in 2001
11	12 homes in Zabeel	12.45	Completed in 2002
12	8 homes in Zabeel	8.722	Completion due in 2003
13	50 homes in Oud Al-Matina	18.0	Completion due in 2003
14	67 homes in Hatta	30.29	Completion due in 2003
15	62 homes in Hatta	28.5	Completion due in 2003
16	70 homes in Hatta	33.97	Completion due in 2003
17	23 homes in Lihbab	17.00	Completion due in 2003
TOTAL	660 Homes	359.751 Million	

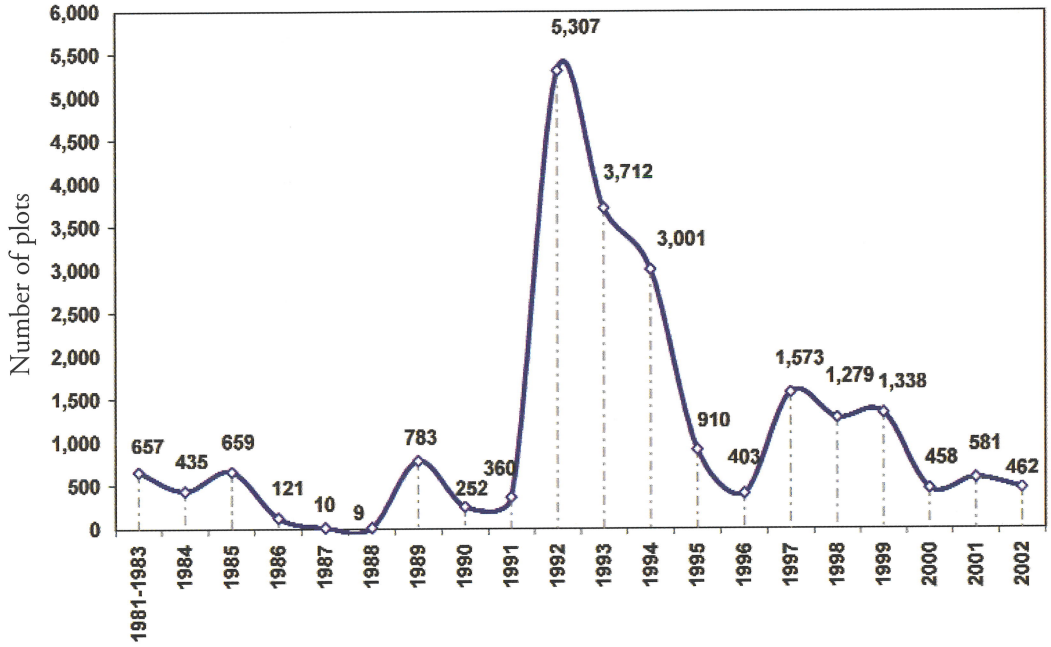
TOTAL for tables 1, 2 & 3 Dh 1,102,855,800

* value of projects implemented under the sole supervision of the Municipality.

Table 4: Number of residential plots of land granted, 1981 – 2002.

Years	Number of plots granted
1981 – 1983	657
1984	435
1985	659
1986	121
1987	10
1988	9
1989	783
1990	252
1991	360
1992	5,307
1993	3,712
1994	3,001
1995	910
1996	403
1997	1,573
1998	1,279
1999	1,338
2000	458
2001	581
2002	462
TOTAL	22,315

Number of plots granted between 1981 – 2002



Award for Government Housing Section

In 2000, the efforts of the Government Housing Section and its various activities relating to the building of Government housing projects were acknowledged with the award of a Certificate of Appreciation from the Council of Arab Ministers of Housing and Construction for an 88-house project at Hatta.

بسم الله الرحمن الرحيم

مجلس وزراء الاسكان والتعمير العرب

شهادة تقديرية

قرر مجلس وزراء الإسكان والتعمير العرب

منح دولة الإمارات العربية المتحدة

جائزة المشروع السكني المنفذ بالمائة "بروث 88 سكن ميسر بمنطقة حتا بإمارة دبي"

لعام 2000

رئيس مجلس وزراء الاسكان والتعمير العرب

الدورة : 18

الأمين العام لجامعة الدول العربية

Examples of covers from booklets for government housing designs

Publications

In order to explain the role of the Government Housing Section and to help it to establish a better relationship with citizens benefiting from its services, as well as to enhance their understanding of the Section's work, a number of booklets have been issued.

The first, issued in 1989, presented various house designs offered to the public as well as a brief description of architectural functions and of how to choose what is suitable. The procedures relating to applications to the programme were also explained.

In 1994, another booklet included a series of designs classified according to the areas in which they could be built, so as to simplify matters for citizens of low income and their families. This booklet also contained information to help them in dealing with other parties, such as contractors and others, and to help them to convey their ideas and to specify their requirements in a clear manner.

In 1999, a third booklet was issued, which contained a variety of designs and ideas which are easy to implement, this being intended to help citizens to submit their ideas to firms of engineering consultants so that the necessary drawings can be prepared for implementation, the issuing of the necessary licences and for the supervision of the process of implementation.

Establishment & Development of the Personnel Department

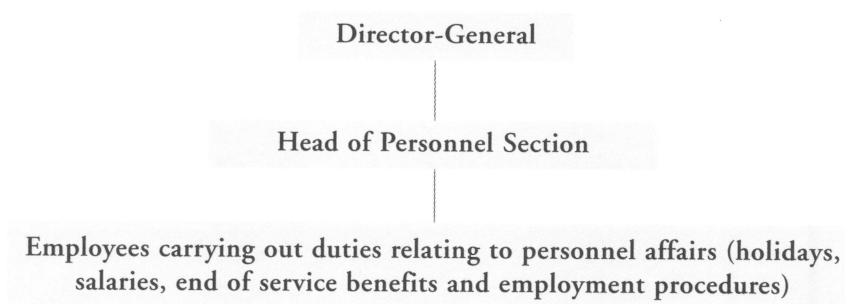
Over the years since it was established, the growth of the Municipality and its various functions has led to the frequent introduction of new administrative units within the framework of the Organisation Chart. Associated with this has been a continual increase in the number of employees, requiring, at an early stage, the establishment of a Personnel Section, to handle employee affairs.

At the beginning, the section carried out its work manually, maintaining individual files relating to each employee. The functions of the section were the hiring of new employees, including manual labourers, termination, housing, procedures related to contracts, promotions and holidays, the handling of any required disciplinary action and certificates, the handling of affairs relating to manual labourers working in the health, agriculture and engineering sectors, the carrying out of investigations, where necessary. Other functions included the handling of external correspondence and audit.

It soon became apparent that there was a need for a formal structure to deal with personnel affairs and work began on the drafting of internal regulations covering issues such as holidays, working hours and disciplinary action. These were then amended, as appropriate, to take account of any changes within the Municipality that led to an increase in activities. Prior to 1973, few specific job titles had been created, and there was little in the way of a grading structure. After 1973, however, attention began to be paid increasingly to such topics.

In the mid-1970s, the Municipality's Organisation Chart was amended with the formal establishment of a Section to carry out duties related to personnel affairs. Its task are shown in Chart No. 1.

Chart No. 1. Organisation Chart for Personnel Section, 1975 – 1985



Further development continued to take place within the Administration of the Municipality as a whole, including increases in personnel, and a revision of the structure relating to personnel affairs was required. On 25th October 1986, therefore, Administrative Directive No 286 was issued, providing for an initial review of the administrative Units in different parts of the Municipality. This was implemented in two stages.

- First, employees were classified according to job type, with those carrying out similar work being assigned to Units within each section that were appropriate. This was the beginning of the introduction of Units in the Municipality.

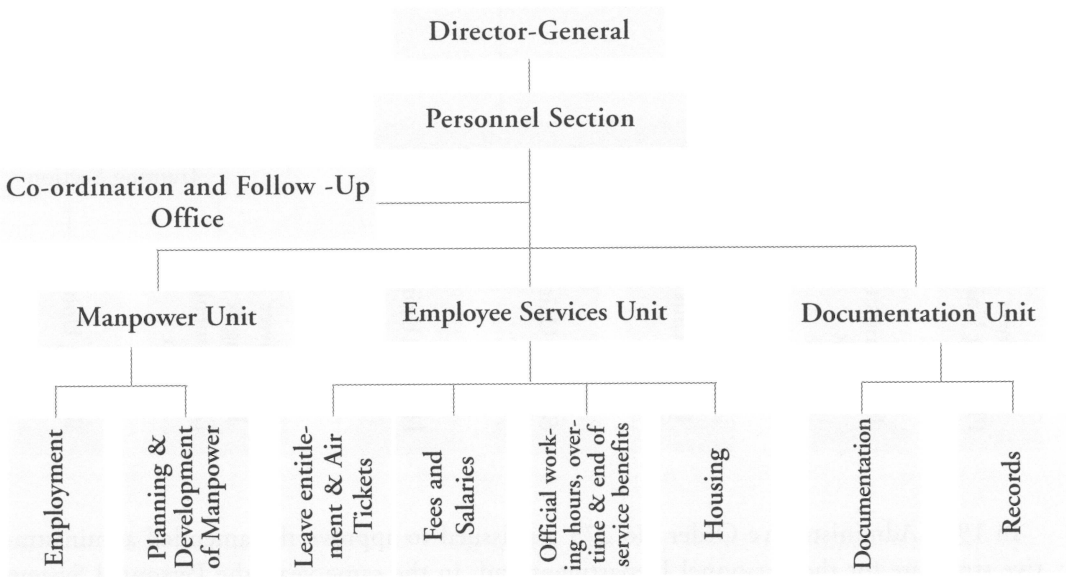
- Following completion of this task, the existing administrative structures were amended, while new activities such as training and organised methods of work were introduced. To cope with this, three Units were created within the Personnel Section.

  – These were the Manpower Unit, handling both employment and planning.
  – The Employee Services Unit, divided into four groups handling holidays and air tickets, fees and salaries, working hours and overtime and, finally, housing.
  – The Documents and Records Unit.

In 1986, a major step forward was made in terms of the use of computer technology and the introduction of automated procedures. First, a database of employees and manual labourers was created. Work then began on procedures relating to end of service benefits, holiday entitlements and bonuses, this continuing until the end of the decade.

On 18th December 1988, Administrative Order No. 311 was issued, re-organising the Personnel Section to take account of the increased number of employees, to improve the quality of staff and to amend job titles, as appropriate. A special Centre was established to deal with enquiries from Municipality staff and to handle enquiries from the public or to provide help in completing applications. The revised structure is illustrated in Chart No. 2.

Chart No. 2. Organisation Chart for Personnel Section in 1988



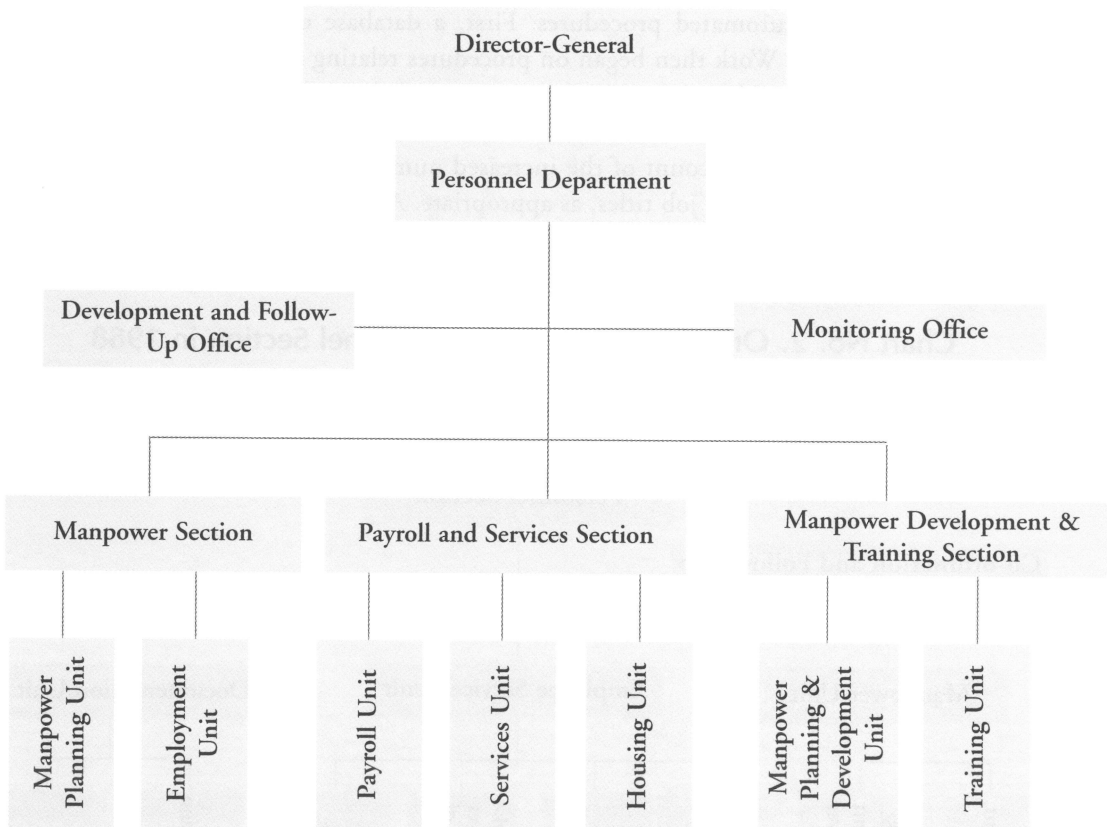
In 1988, work also began on the preparation of a proper job classification system, based on specialisations, and on allocating employees on the basis of their job titles and their specific job grades, of which a total of 14 were defined.

On 25th May 1991, Administrative Order No 147 amended the Organisation Chart to raise the Personnel Section to the level of a Department, under the direct supervision of the Director-General. Three subsidiary sections were established:

1– Manpower
2– Payroll and Services
3– Manpower Development and Training.

A Development and Follow-Up Office and a Monitoring Office were also created, as shown in Chart No. 3.

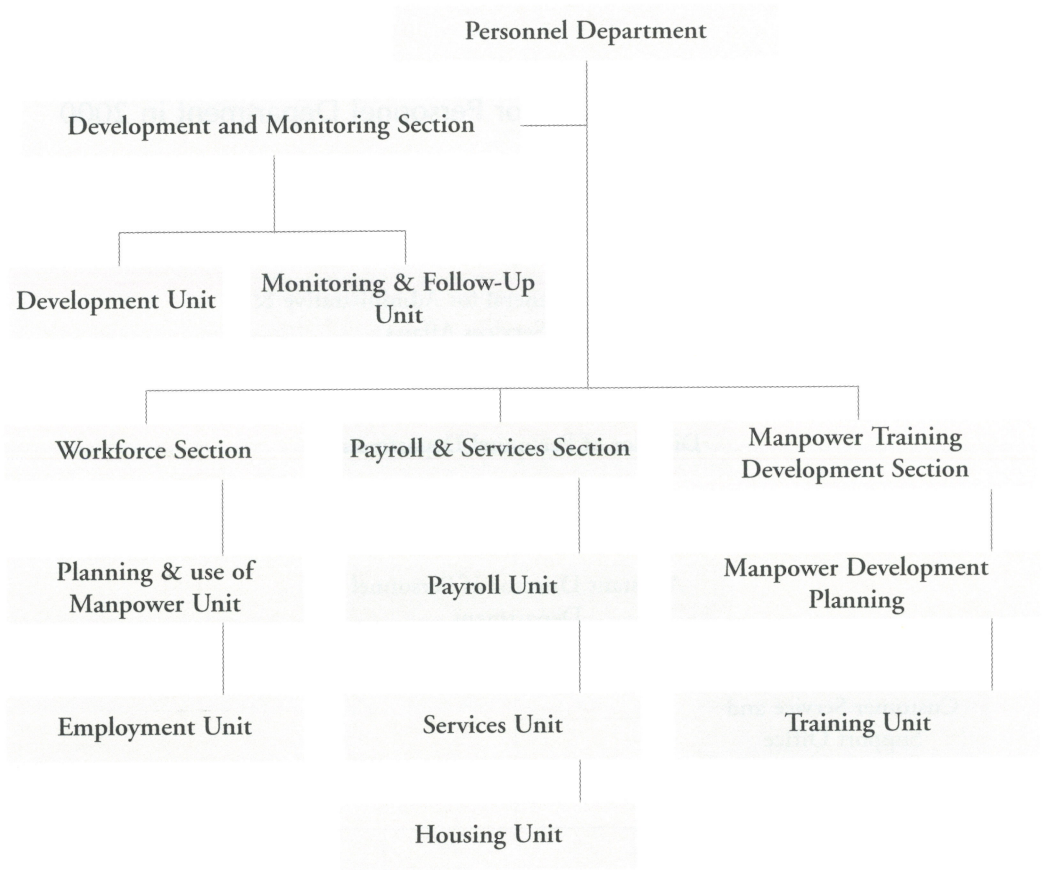
Chart No. 3. Organisation Chart for the Personnel Department in 1991



In 1992 Administrative Order No 273 was issued to approve the amended administrative structure for the Personnel Department and, in the same year, the Personnel System for employees working in local offices within the Emirate of Dubai was issued. This was followed by the issuing of executive regulations for Emirati employees appointed on the basis of work contracts.

In 1993, Administrative Order No. 215 was issued to amend Administrative Order No 273 for 1992, combining the duties of the Development and Follow Up Office and Audit Office into one Section, the Development and Monitoring Section, as illustrated in Chart No. 4.

Chart No. 4. Organisation Chart for the Personnel Department in 1993



A training course in progress

In 2000, Administrative Directive No. 261 for that year was issued to approve a further revision of the Organisation Chart for the Department, establishing four Sections, as shown in Chart No. 5.

Chart No. 5. Organisation Chart for Personnel Department in 2000

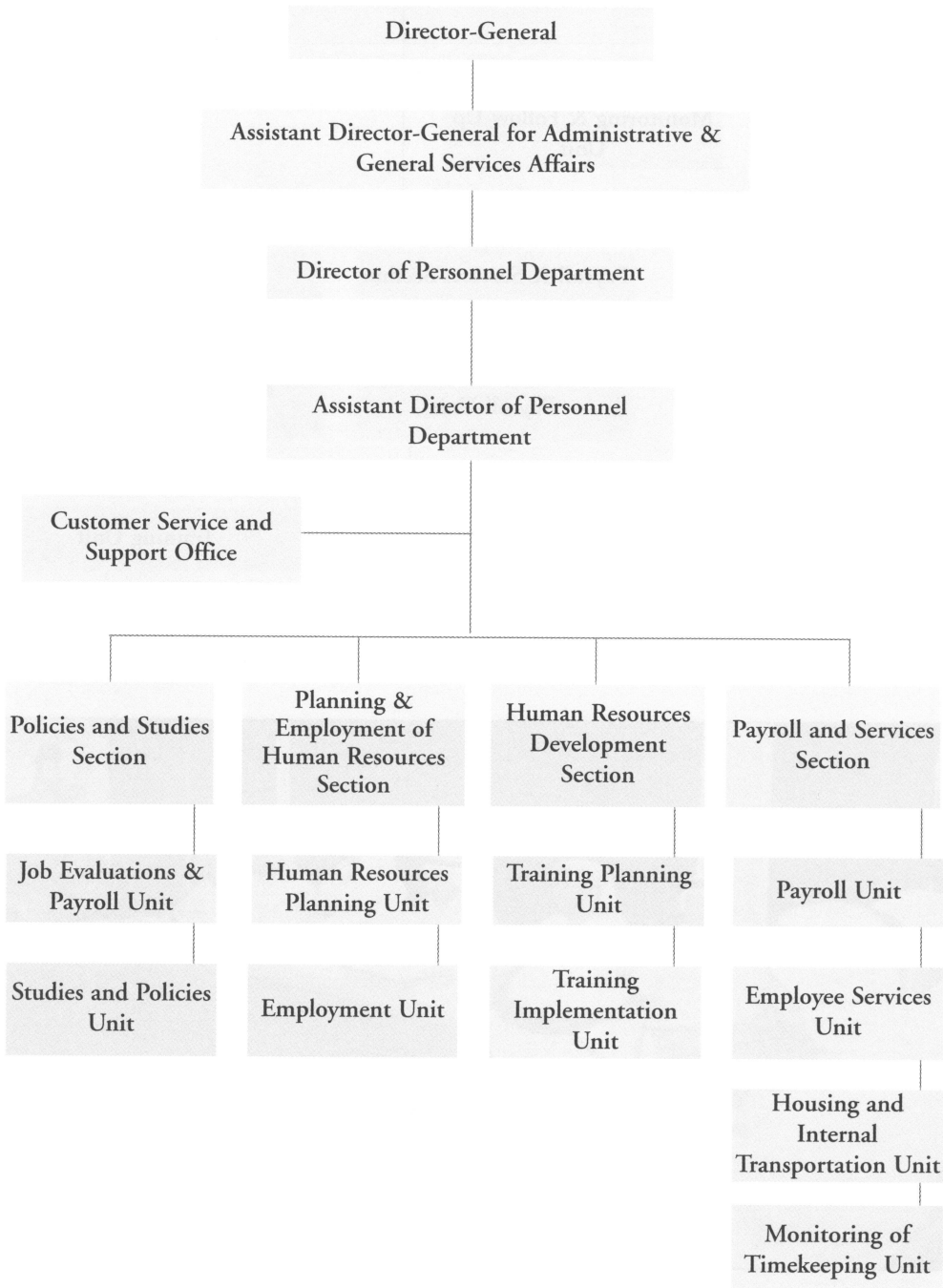


Chart No. 7 Organisation Employment Chart for the Personnel Department in 2001

Customer Service and Support Office

Head of Customer Service and Support Office	1
Personnel Committee Reporter	1
Administrative Officer	1
Support Officer	1
Assistant Customer Service Officer	3
Administrative Support	2
Administrator for documentation of employment applications	1
Documentation Administrator	1
Archiving Administrator	2
Receipt of employment applications Administrator	1
Typist	1
Photocopier	1
Messenger	1

Personnel Deptment

Director of Personnel Department	1
Assistant Director of Personnel Department	1
Legal Advisor	1
Secretary	2
Messenger	1

Planning and Employment of Human Resources Section

Head of Planning & Employment of Resources	1
Secretary	1
Workforce Planning Specialist	1
Assistant Administrator for incoming & outgoing correspondence	1
Administrative Support	1
Employee	1

Human Resources Planning Unit

Head of Human Resources Planning Unit	1
Administrative Officer	2
First Administrative Officer Planning	1
Planning Officer	1
Internal Procedures Officer	1
Human Resources Planning Officer	2
End of service Administrator	1

Employment Unit

Head of Employment Unit	1
Administrative Officer	1
Employment Officer	2
Administrative Officer	2
Employment Procedures Administrator	2
Assistant Administrative Assistant Advertising	1
Documentation of employment applications Administrator	1

Payroll and Services Section

Head of Payroll and Services Section	1
Secretary	1
First Administrative Support	1
Mail Administrator	1
Clerk	1
Heavy Vehicles Driver	1
Employee	1

Payroll Unit

Head of Payroll Unit	1
Administrative Officer end of service/retirement	1
Administrative Officer Contracts	1
Performance Evaluation Officer	1
Trainee Payroll Officer	1
Assistant Overtime Officer	1
Assistant end of service Officer	1
Support Administrator	3

Monitoring of Timekeeping Unit

Head of Timekeeping Unit	1
Timekeeping auditor	10

Employee Services Unit

Head of Services Unit	1
Employment Benefits Officer	1
Administrative Officer	1
Services Officer	1
Trainee Services Officer	1
Assistant Administrative Officer	2
First Administrator leave entitlement	1
Passports & Residence Administrator	2
Support Administrator	5

Housing Unit

Head of Housing Unit	1
Family Housing supervisor	1
Singles Housing Supervisor	1
Laborer Housing Supervisor	2
Data Input Clerk	1
Administrative Support	2
Housing Administrator	1
Mosque Imam	2
Messenger	1
Heavy Vehicles Driver	2
Light Vehicles Driver	1
Carpenter	1
Housing Labourer	14
Laborer	7

Human Resources Development Section

Head of Human Resources Development Section	1
Secretary	1
Development specialist	1
Support Administrator	1
Typist	1
Employee	1

Training Planning Unit

Head of Training Planning Unit	1
First Training Planning Officer	1
Trainee Training Planning Officer	1
Assistant Training Planning Officer	1
Trainee	

Training Implementation Unit

Head of Training Implementation Unit	1
First Training Officer	1
First Administrative Officer	1
Second Administrative Officer	1
Assistant Training Officer	1
Assistant Administrative Officer	1

Policies and Studies Section

Head of Policies and Studies Section	1
Personnel Affairs Specialist	1
Administrative Support	1
Employee	1

Job Evaluations and Payroll Unit

Head of Job Evaluations and Payroll Unit	1
Job Evaluation Specialist	1
Administrative Officer	1
First Job Analyst	1
Job Analyst	1
Administrative Officer for Salary Surveys	1
Administrative Support	1

Studies and Policies Unit

Head of Studies and Policies Unit	1
Workforce Planning Officer	1
Policies Administrative Officer	1
Administrative Support	1

The Main Duties and Responsibilities of the Personnel Department and its Affiliated Sections

The Personnel Department is responsible for the preparation, study and development of human resources within the Municipality, these tasks including planning, monitoring, training, employment, salaries, allowances, promotions, benefits and administration of employee housing.

Policies and Studies Section

The responsibilities of this Section include:

- Implementation and modernisation of policies, legislation and the Municipality's procedures as well as undertaking studies and research relating to human resources and the holding of the necessary seminars and workshops.
- Preparation of plans, annual work plans and the carrying out of studies and statistical surveys relating to work performance, salaries, benefits and compensations.
- Studying of all problems, issues, and obstructions that may affect the carrying out of work and making the necessary suggestions and recommendations.
- Preparation of studies for analysis and classification of jobs, updating existing job descriptions and preparing new ones for proposed new posts, carrying out this work in co-ordination with the relevant units of the organisation, as well as preparing descriptions of the Department's duties.

Human Resources Planning and Employment

The responsibilities of this Section include:

- Preparation, implementation and follow-up of human resources development plans for the short, medium and long term.
- Initiating the implementation of plans related to the development of employment in the Municipality, such as the Emiratisation programme.
- Efficient supervision of the preparation of the human resources budget and monitoring its implementation, once approved.
- Analysis and preparation of job descriptions and their evaluations.

Human Resources Development Unit

The responsibilities of this Unit include:

- Compiling a comprehensive plan to develop, train and employ human resources in the Municipality.
- Implementing the policy of Emiratisation through job development, training, scholarships, familiarisation programmes and the employment/work cycle as well as following up on performance and monitoring the turnover rate in human resources.
- Implementation of the Emiratisation plan through organisation of training courses, seminars, internal and external studies which will strengthen the skills of Municipality employees.
- Conducting studies to evaluate the effectiveness of training courses.
- Follow-up and co-ordination of summer work placement for school, university and college students within the Municipality's various administrative units.

Payroll and Services Section

The responsibilities of this Section include:

- Implementation of directives relating to employee salaries, allowances and benefits such as housing, transport and pensions and to ensure that rules, executive decisions and instructions issued are observed.
- Implementation of directives relating to promotions, transfers, salaries, allowances, benefits, renewal of employment contracts and disciplinary actions, pensions, end of service benefits and so on.
- Arranging for travel and air tickets, as appropriate, and handling matters relating to the residency visas and passports of employees, as well as related duties.
- Supervising working hours, checking attendance cards and attendance sheets, whether covering official working hours of hours worked as overtime.
- Following up of procedures for the annual appraisal of employees.
- Issuing of ID cards and work certificates.

Development of the Municipality workforce

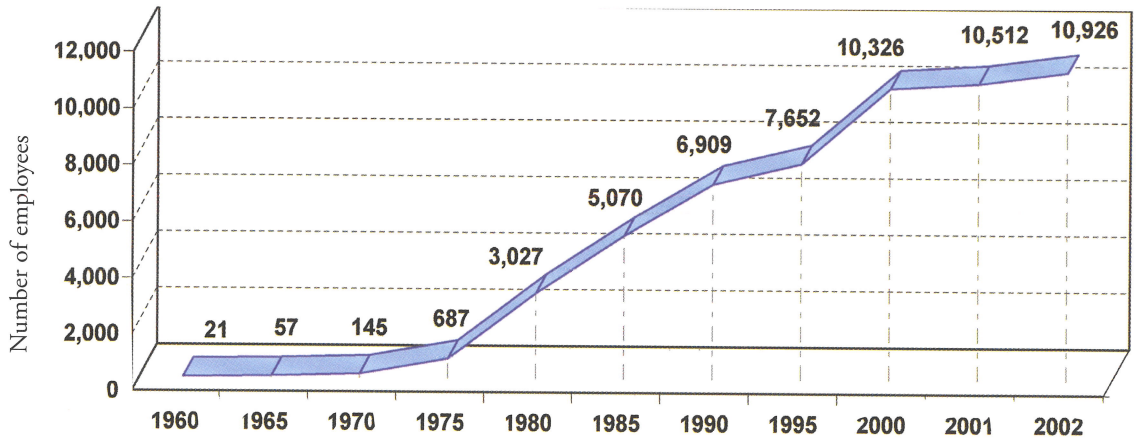
The table that follows shows the number of employees in the Municipality in the years from 1960-2001 and also shows the percentage of Emiratis. Excluding manual labourers, it is clear that in 1960 until 1985, there was a clear increase in the number of Emirati employees, (although the total workforce grew faster). From 1985 onwards, the percentage of Emiratis compared to the total number of employees rose from 8 per cent to 36 per cent in 2002.

Growth in employee numbers, 1960 – 2002

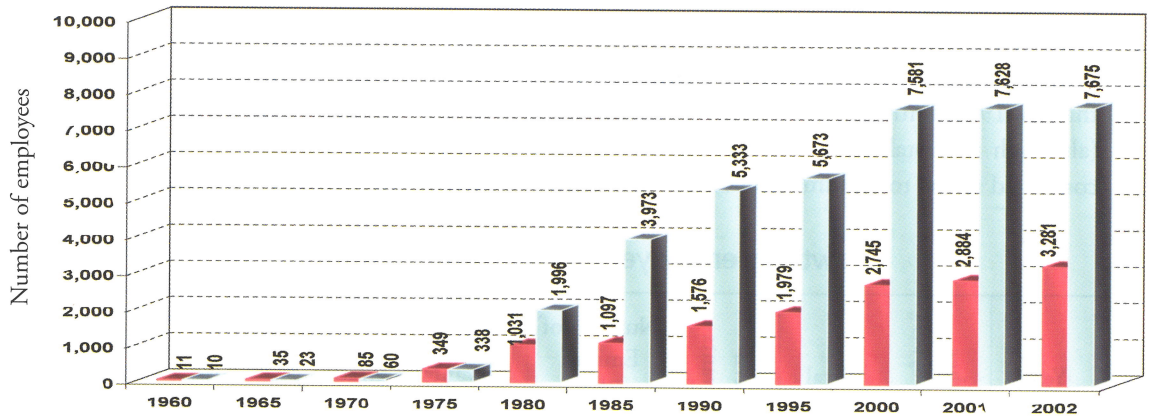
Year	Other Employees	Total	Civil Servants	Number of Emirati Civil Servants	Total Civil Servants in Grades 1- 10	Percentage of Emiratis compared with total number of Civil Servants in Grades 1-10
1960	10	21	11	6	12	50%
1965	23	57	35	16	35	46%
1970	60	145	85	34	92	37%
1975	338	687	349	75	500	15%
1980	1,996	3,027	1,031	98	1,633	6%
1985	3,973	5,070	1,097	158	1,975	8%
1990	5,333	6,909	1,576	471	2,944	16%
1995	5,673	7,652	1,979	848	3,327	25.4%
2000	7,581	10,326	2,745	1,504	4,610	32.6%
2001	7,628	10,512	2,884	1,634	4,805	34%
2002	7,675	10,926	3,251	1,836	5,104	36%

Civil Servants: includes administrative employees, supervisors, engineers, specialists and Monitors.
Other Employees: includes labourers, drivers, craftsmen and operators.

Growth in employee numbers, 1960 – 2002



Growth in number of civil servants and employees, 1960 – 2002

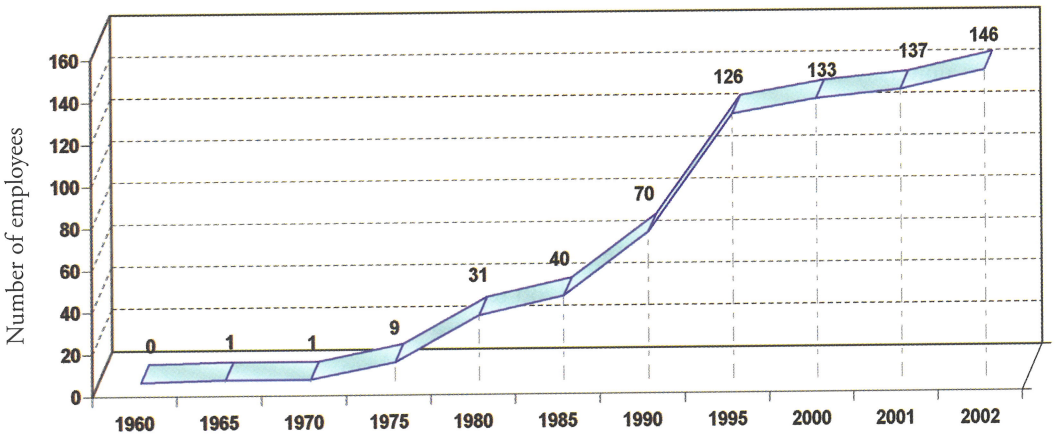


Workforce of the Personnel Department compared with the total number of employees in the Municipality, 1960 – 2002

Item	1960	1965	1970	1975	1980	1985	1990	1995	2000	2001	2002
Personnel Deptment	-	-	-	-	-	-	70	7	16	19	18
Planning & Employment of Human Resources Section	-	-	-	-	-	-	-	24	23	21	20
Payroll and services Section	-	-	-	-	-	-	-	58	75	77	88
Development of Human Resources Section	-	-	-	-	-	-	-	7	12	12	13
Policies & Studies Section	-	-	-	-	-	-	-		7	8	7
Development & Monitoring Section	-	-	-	-	-	-	-	30	-	-	-
Total number of employees in Personnel Depart.	-	1	1	9	31	40	70	136	133	137	146
Total employees in the Municipality	21	57	145	687	3,027	5,070	6,909	7,652	10,326	10,512	10,926

* Due to the amendment to the administrative structure of Personnel Section to Personnel Department in 1991, it is not possible to divide the workforce according to Section. It is, therefore, presented as totals.

Total number of employees in the Personnel Department, 1960 – 2002



Beginning in 1986, a database was compiled on computer for employees and labourers employed by the Municipality. This was expanded in the early 1990s to include the following:

- Employment system
- Employment Contracts System
- Follow up of Residencies and Passports System
- Employee Data System
- Follow-up of Training and Scholarship Procedures system
- Timekeeping System, printing certificates, annual evaluations and surveys on training requirements
- Job coding system
- Leave entitlement and travel system
- Employee Housing system
- Workforce Utilisation System

Other systems are being prepared, including the following:

- Standard Performance Averages System
- Salary survey System
- Job Development System
- Work injuries and treatment system
- Job advertising by Internet System
- Training Budget System...etc.

Plans and Programmes

The use of computers in handling Personnel affairs has continued to develop. In particular, there has been progress in this field in terms of Human Resources Planning, where the following has been achieved.

1- Preparation of a three-year plan for workforce requirements.
2- The preparation of a medium term plan for Emiratisation, covering a three-year period.
3- Preparation of plans and development programmes and specifying the process for arranging employment.
4- Preparation of the annual employment budget and a plan for its implementation.
5- Preparation of job structures, job descriptions and their evaluations.

With regard to plans and programmes for Emiratisation, a key objective, the Personnel Department prepared in 1986 a special plan to increase the overall quality and percentage of Emiratisation.

Emiratisation policy was pursued through a systematic focus on implementation of plans drawn up for the three year period from 1988 ñ 2000 and for a five year period up to 2004. These plans included costs and an annual target for the achievement of Emiratisation, without compromising the need for productivity and efficiency. This was done through planning for systematic implementation, a

familiarisation process and arrangements for replacing staff, as well as by the creation annually of 30 developmental positions for Emiratis graduating from university and of around 20 posts for Emiratis lacking university education, this being incorporated in the Workforce Development and Training budget allocated for this purpose. These vacant positions were filled in 2001.

The Municipality has placed Emiratisation of jobs at the top of its strategic priorities. In order to achieve its targets in this field, the Municipality has taken the following steps:

- Reduction of the basic training period for university graduates through condensing of the training programme and introducing mechanisms for continuous follow-up.
- Approving the Emiratisation policy and job replacement and the 5 Year Emiratisation Plan (2000-2004), under which organisational units are required to present their Emiratisation plans and the mechanisms they will use to implement them.
- Sending representatives to attend careers fairs held in the UAE and to meet with university students studying in national and foreign academic institutions to promote the Municipality as a career option.

The Municipality has also agreed a number of educational projects related to the Emiratisation of jobs with the Higher Colleges of Technology. These involve the signing of contracts with secondary school graduates and providing them with financial support during their years of study and training. Among the courses involved in this scheme are the Public Health Diploma and the Civil Engineering Diploma.

By July 2001, the Emiratisation programme had reached 100 per cent for leadership position and 95 per cent for supervisory positions, up from 77 per cent the previous year. Between 1999 and 2000, the number of Emirati women rose from 27.5 per cent to 32.7 per cent of all UAE national employees. These hold positions in the fields of engineering, supervisory roles, information technology, architecture and others, evidence of the Municipality's pursuit of equality in employment opportunities.

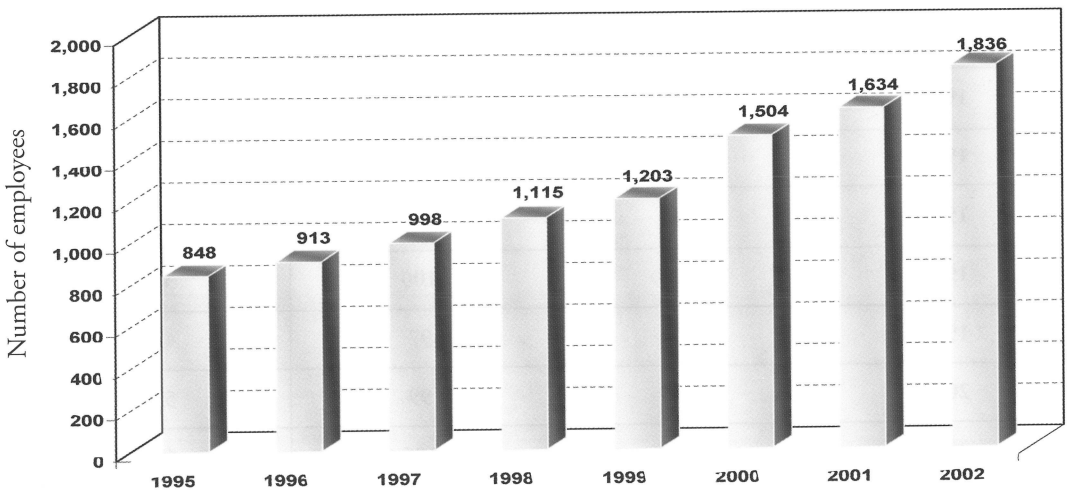
A programme of Municipality-supported scholarships for Emiratis to undertake further education has also been introduced.

Another initiative that has been undertaken in the provision of job opportunities for people with special needs, 27 of whom are now employed.

Emirati Workforce (Male/ Female), 1995 – 2002

Year	Distribution			Percentage of Female Nationals compared to the total Emirati workforce
	Male	Female	Total	
1995	669	179	848	21.1%
1996	698	215	913	23.5%
1997	754	244	998	24.4%
1998	845	270	1,115	24.2%
1999	872	331	1,203	27.5%
2000	1,065	439	1,504	29.1%
2001	1,107	527	1,634	32.2%
2002	1,236	600	1,836	32.7%

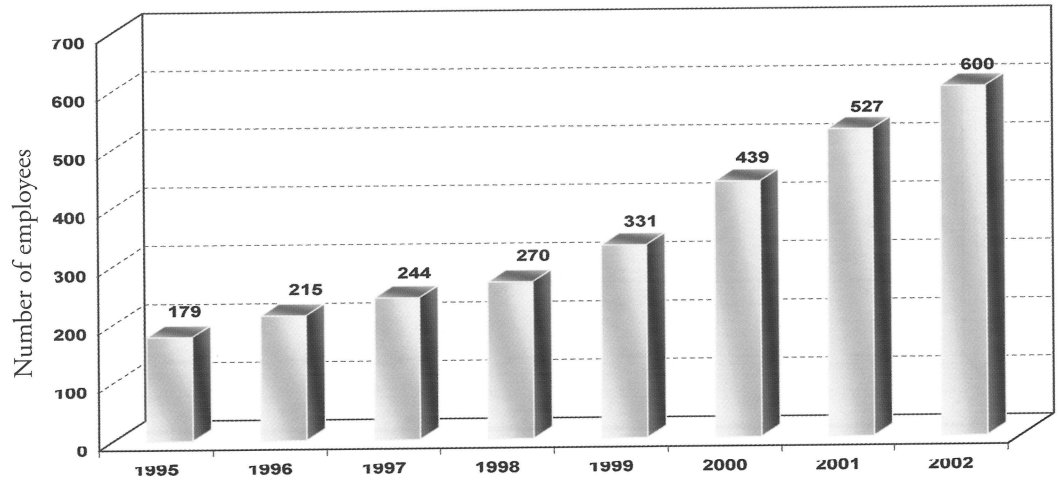
Emirati Workforce, 1995 – 2002



Comparison of Emiratisation percentages, 1995 – 2002

Year	Number of Emirati Employees	Total Number of Employees - Grades 1-10	Percentage of Emiratisation
1995	848	3,327	25.4%
1996	913	3,379	27%
1997	998	3,550	28.1%
1998	1,115	3,801	29.3%
1999	1,203	4,200	28.6%
2000	1,504	4,610	32.6%
2001	1,634	4,805	34%
2002	1,836	5,104	36%

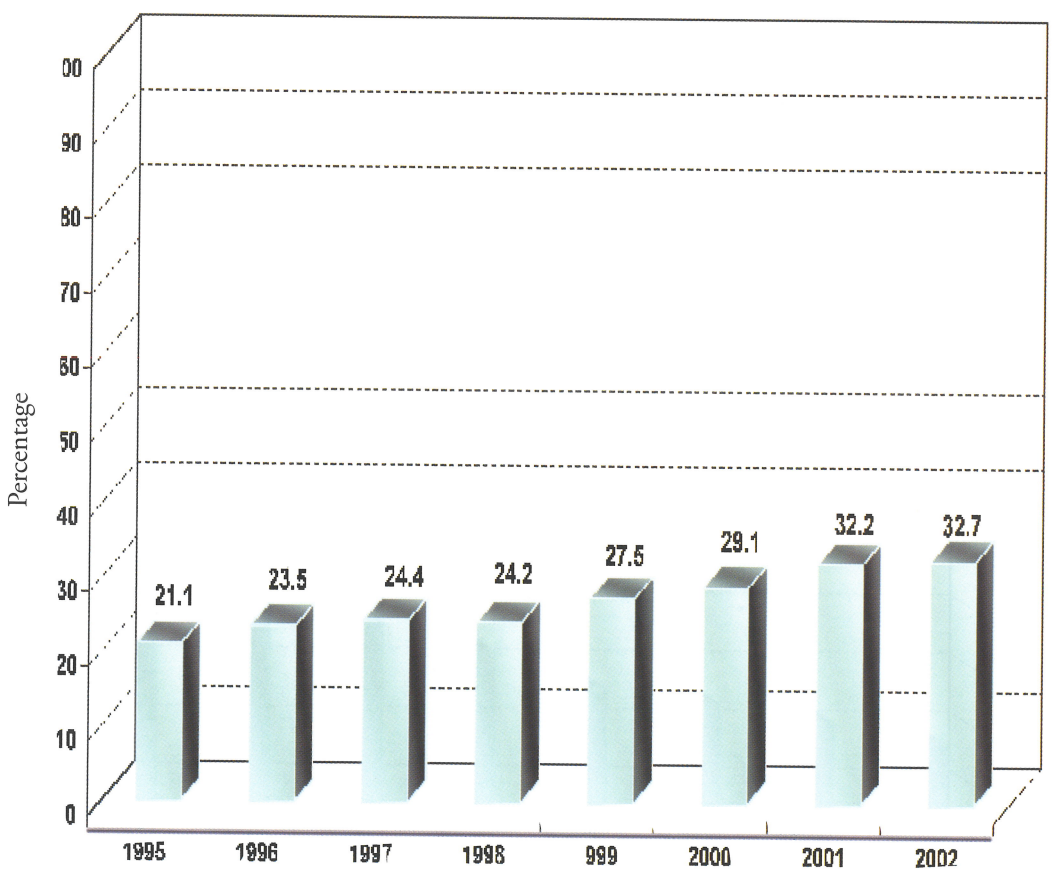
Female Emirati Employees, 1995 – 2002



Female employees of the Municipality, 1995 – 2002

Year	Female Emirati Employees	Female Expatriate Employees	Total
1995	179	105	284
1996	215	98	313
1997	244	108	352
1998	270	100	370
1999	331	97	428
2000	439	99	538
2001	527	105	632
2002	600	91	691

Percentage of female Emiratis compared to the Municipality's total work-force, 1995 – 2002



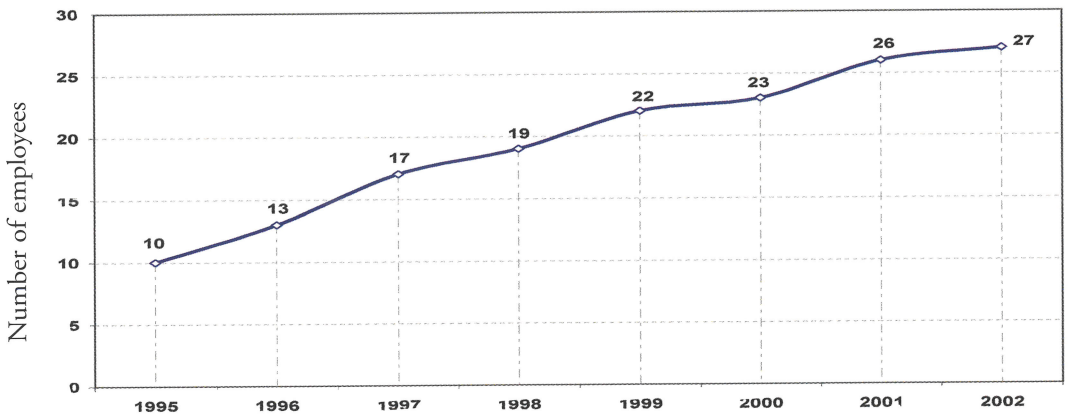
Special Needs Employees,1995 – 2001

Year	Total
1995	10
1996	13
1997	17
1998	19
1999	22
2000	23
2001	26

Special Needs Employees, 2002

No.	Department	Positions	No. of Employees
1	Planning & Surveying Depart.	2 System Technicians – 1 Assistant Technician – 1 Administrator	4
2	Public Parks & Horticulture Depart.	4 Gardeners – 3 Agricultural Labourers	7
3	Drainage and Irrigation Depart.	1 Telephone Operator – 1 Foreman – 3 Cleaners – (1 Assistant Technician – 1 Driver	7
4	Dubai Central Laboratory Depart.	1 Assistant Clerk – 1 Operator – 1 Technical Labourer	3
5	Personnel Department	2 Typists	2
6	Contracts & Purchasing Depart.	1 Administrative Officer	1
7	General Maintenance Depart.	1 Telephone Operator	1
8	Building and Housing Depart.	1 Typist	1
9	Public Transport Department	1 Telephone Operator	1
TOTAL 2002			27

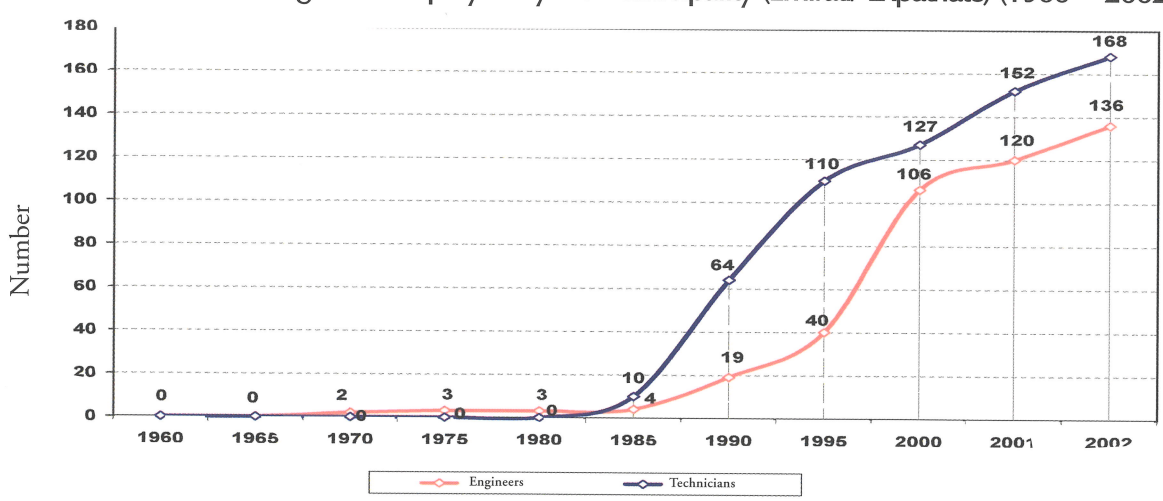
Development in the Number of Special Needs Employees,1995 – 2002



Technicians & Engineers employed by the Municipality (Emirati/ Expatriate) (1960 – 2002)

Year	Technicians						Engineers					
	Emirati				Expatriate	Total	Emirati				Expatriate	Total
	Male	Female	Total	Percentage of Females compared to total Emirati Technicians			Male	Female	Total	Percentage of Females compared to total Emirati Engineers		
1960	-	-	-	-	3	3	-	-	-	-	-	-
1965	-	-	-	-	5	5	-	-	-	-	-	-
1970	2	0	2	-	10	12	-	0	-	-	4	4
1975	3	0	3	-	47	50	-	0	-	-	16	16
1980	3	0	3	-	177	180	-	0	-	-	35	35
1985	3	1	4	25%	272	276	8	2	10	20%	55	65
1990	18	1	19	5%	367	386	58	6	64	9%	62	126
1995	25	15	40	37.5%	354	394	102	8	110	7%	68	178
2000	64	42	106	40%	1,081	1,187	118	9	127	7%	132	259
2001	68	52	120	43%	1,130	1,250	136	16	152	10%	148	300
2002	72	64	136	47%	1,149	1,285	148	20	168	11.9%	171	339

Technicians and Engineers employed by the Municipality (Emirati/ Expatriate) (1960 – 2002)



Training and Familiarisation Plans

Due to the increased importance of training and familiarisation programmes in meeting the department's plan to prepare employees, the following principles were established by the Department.

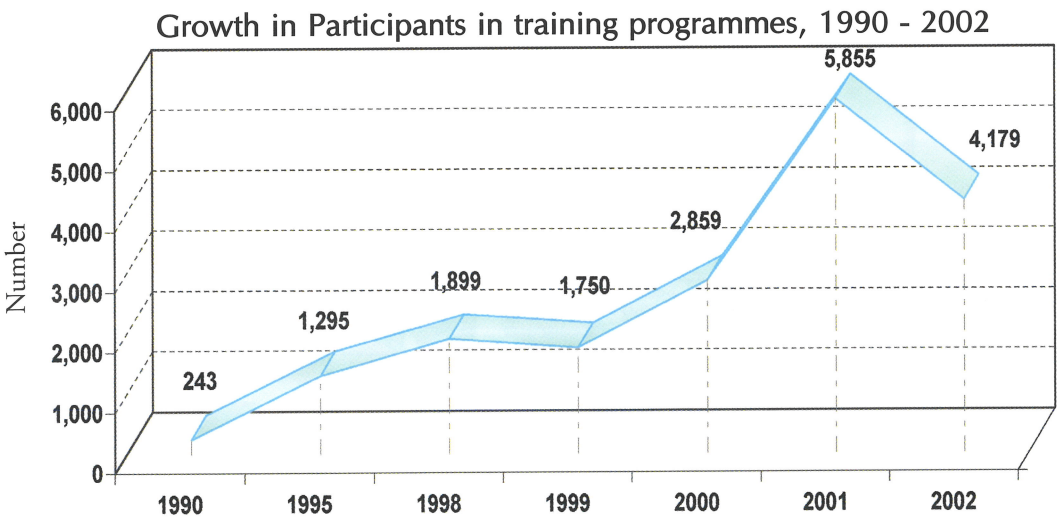
First, short and medium term plans are to be made on an annual basis relating to the training and familiarisation of employees.

Secondly, the training requirements should be specified in accordance with the relevant plans and criteria for job development, annual performance evaluation, production criteria and rate of achievement, the unit work plan, the requirements of the training list and the implementation of the Emiratisation and training programmes. This training should include practical in-house training, theoretical training within the Municipality, as well as externally:

- In the country or abroad
- External practical training
- Attendance at various seminars and workshops
- Carrying out of field trips to teaching facilities
- Where appropriate, the granting of scholarships for further study whether locally or abroad.

The following table provides a summary of training programmes and the number of participants during the period 1990 – 2002

Year	Number of Programmes carried out	Number of Participants
1990	82	243
1995	203	1,295
1998	210	1,899
1999	230	1,750
2000	343	2,859
2001	533	5,855
2002	385	4,179



The following table provides details of the plans approved and implemented, as well as the rate of achievement of training targets in 2000.

Item	Number of Programmes			Number of Participants		
	Approved	Implemented	Percentage achieved	Approved in the plan	Participants	Percentage achieved
Internal Training Programmes & Administrative, Behavioural & Financial Programmes	66	116	176	959	1,566	163
English Language Programmes	11	2	18	167	27	16
Comprehensive Quality Programmes	1	12	1,200	30	253	843
Services Programmes	8	8	100	200	200	100
Local Training Programmes	41	110	268	111	645	581
External Training Programmes	37	45	122	65	65	100
Scholarships	4	7	175	9	41	456
Basic Training (at work)	14	43	307	27	62	230
Total	182	343	188	1,568	2,859	182

Theoretical Training in the Municipality to familiarise employees and to increase their efficiency

Scholarships

Employees are eligible to be nominated for scholarships if they have served the Municipality for a minimum of three years. The objective is to for them to gain academic qualifications in fields related to the work of the Municipality. The scholarships granted up to the year 2002 covered 99 employees, in a total of 21 different specialised programmes of study, as follows:

Ref	Name of Programme	Number
1	General Health Diploma	29
2	Civil Engineering Diploma	28
3	Veterinary Medicine B.Sc.	1
4	BA Media and Public Relations	4
5	B.Sc. Quantity Surveying	3
6	B.Sc. Information Technology Systems	1
7	Higher Education (Urban Design)	8
8	MBA (Masters in Business Administration)	9
9	Masters in Engineering, Planning and Transport	1
10	Masters in Quality Administration	3
11	Masters in Architecture	1
12	Masters in Urban Design	1
13	Masters in Computer Science	1
14	Masters in Project Administration	1
15	Masters in Veterinary Epidemics	1
16	Masters in Naval Engineering	1
17	Masters in Geodesic Engineering	1
18	Masters in Food Microbiology	1
19	Masters in Human Resources Management	2
20	Phd in Quality Management	1
21	Phd in Development and Measurement of Government Performance	1
Total		99

29 employees had completed their studies by the end of 2002, in various local and overseas universities.

Scholarship Students sent by the Municipality to gain academic qualifications, 1995 – 2002

Type of Certificate	1995	1996	1997	1998	1999	2000	2001	2002
Environmental Health Diploma	-	5	2	19	-	6	16	6
Civil Engineering Diploma	-	-	-	14	-	8	11	11
Information Systems Management Diploma	-	-	-	-	1	-	-	-
Phd/ B.Sc.	-	-	-	-	1	-	5	4
Higher Education	-	-	-	-	-	-	-	8
Masters	-	3	2	3	6	3	7	7
Phd	-	-	-	-	-	2	-	1
Total	-	8	4	36	8	19	39	37

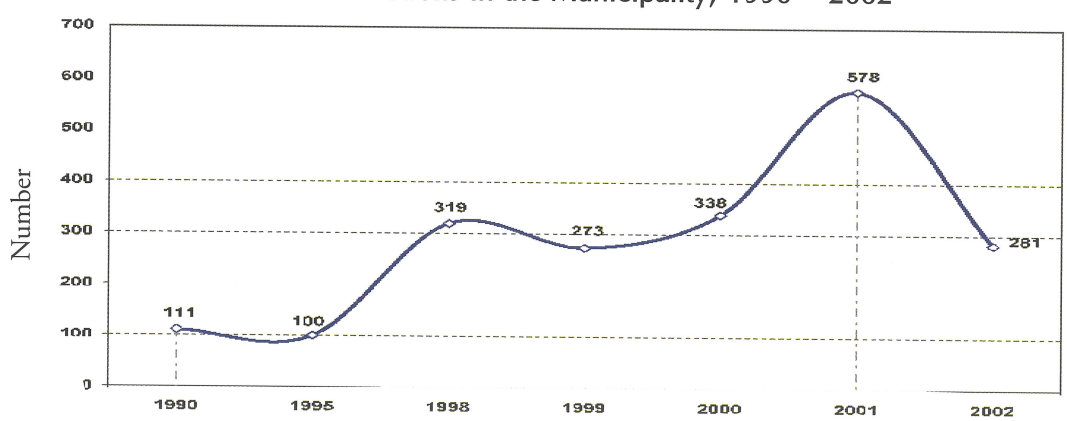
Total Number of Appointments in the Municipality, 1990 – 2002

Year	1990	1995	1998	1999	2000	2001	2003
Total Appointments	684	715	1,805	1,720	1,681	1,458	1,317

Internal Promotions in the Municipality, 1990 – 2002

Year	Total number of Promotions		Overall Total
	Emirati	Expatriate	
1990	28	83	111
1995	21	79	100
1998	43	276	319
1999	130	143	273
2000	156	182	338
2001	263	315	578
2002	127	154	281

Internal Promotions in the Municipality, 1990 – 2002



Personnel Department expenditure, 1990 – 2002, in UAE dirhams

Year	Payroll	Current Expenditure	Capital Expenditure	Total Expenditure
1990	5,453,480	656,971	954,362	7,064,813
1995	10,766,705	679,417	1,652,879	13,099,001
1998	10,968,893	1,626,867	288,256	12,884,016
1999	12,202,799	1,330,467	332,208	13,865,474
2000	14,540,494	1,369,543	381,884	16,291,921
2001	17,588,323	3,287,468	1,033,137	21,908,928
2002	21,512,338	1,385,593	428,878	23,316,809

Development Work

The Personnel Department also takes part in a variety of development projects that will yield future benefits. Among these have been:

- Participation in the Distinguished Government Performance Scheme: the Department presented a report on a technical project, which included its experience of creating advanced methods and techniques to complement the various systems, procedures and duties in the department, through the update and development of computer systems specific to the Personnel Department.
- Participation in the quality co-ordination work plan through the holding of workshops on a comprehensive understanding of the meaning of quality for the Municipality's employees, this being undertaken in association with the Administrative Development Department.
- Implementation of a project to replace all the Municipality's manual labourers, so as to unify pay scales and provide opportunities for young workers.

Dubai Municipality has succeeded in reducing costs, effort and time spent while, at the same time, increasing productivity and participation in meeting the specified targets for steady growth. This has required a modernisation of policies and systems, and in 2000, a programme of re-organisation got under way in the Personnel Department.

This involved a revision of administrative procedures and making use of modern technical facilities, so as to improve the efficiency of services offered by the Department in respect of the selection of personnel and responding to the requirements of the various organisational units with regard to developing new human resources skills and experiences.

As the Department grew, and because of its prompt carrying out of the need to develop new approaches with relation to Human Resources, an updating and revision of the human resources policies was devised. This included the introduction of a special system for promotions, performance evaluation, employee relationships, incentives, prizes for excellence, as well as other features that, together, help to make Dubai Municipality a first-choice employer.

Future plans include the application of a new job description and evaluation system, preparation of a medium-term and long-term plan for Emiratisation and job replacement, a survey of salaries and benefits and a job satisfaction survey.

The Department has paid particular attention to Emiratisation, and is proud that now over 90 per cent of all supervisory and administrative jobs are held by Emiratis.

The Municipality has also prepared a suitable atmosphere for all employees from the point of view of access to information and holds a number of seminars in various departments each year to support their activities and to strengthen their technical and administrative capabilities. This process is enhanced by the programme of providing scholarships

A mass wedding for DM staff

to appropriately-qualified employees so that they may go abroad to further their education.

In the field of employee welfare, the Municipality has established a special club, with facilities that include a football pitch, a swimming pool, a gymnasium with the latest sports equipment and a conference hall. The Public Relations Section also arranges a number of trips and other social activities.

Another initiative, the first of its kind in local government in the UAE, has been to provide help to employees with the expenses of marriage. Under the patronage of H.H. Sheikh Hamdan bin Rashid Al Maktoum, Deputy Ruler of Dubai and Head of the Municipality, a group marriage ceremony is arranged annually.

Planning and Surveying Department

In accordance with the directives given by H.H. the late Sheikh Rashid bin Saeed Al-Maktoum, the Municipality has always sought to adopt a proper approach to planning, in accordance with international standards. As far back as 1961, a firm of international consultants was appointed by the Government of Dubai to draw up plans for the development of the Emirate, this being followed by the preparation of the first detailed master plan, in 1970.

During the eighties, the Dubai Municipality was able to create the infrastructure required for the fast-developing city, as well as to construct a variety of service and public utilities projects.

The year 1985 can be considered as the real beginning for the planning of today's city. In that year, international consultants were appointed to lay down the principles and basic objectives of a comprehensive planning programme. By the early 1990s, investments made previously in areas such as the construction of main utilities like road networks, the sewerage network, irrigation and other vital projects began to pay dividends.

It was, of course, necessary for the Municipality to keep abreast of international developments with relation to urban planning and to take into account projected growth, so as to ensure that residents of Dubai would continue to enjoy a prosperous life. A process of preparing long-term plans for future development therefore got under way, covering a twenty year period from 1993 – 2012. These plans including a futuristic vision for the development of construction, taking into account land use, the need for new buildings and an expansion of the roads and bridges network, utilities and public services.

This was followed by the adoption of a strategy to implement an organisation plan and to prepare annual executive programmes as part of a rolling five year plan, beginning with the period 2000 – 2004. During this period, it was planned that all necessary studies covering the whole range of development should be completed, covering housing, industry, public services, utilities, public transport, environment and other sectors. Planning was also intended to tackle issues such as standards and monitoring procedures to ensure that the best possible achievements could be made at the lowest possible cost.

In accordance with the five year plan and the detailed studies on expenditure and general revenues, a plan was then drawn up to specify the priorities for implementation of projects and their locations, this plan covering all aspects of the development programme. At the same time, proper attention was given to public projects to be carried out by the Municipality with relation to services and utilities, these providing important support to the planning for those aspects of development relating to finance, commerce and tourism, with the intention of providing an environment for investment and tourism.

The objective of this study was to put forward a programme for the development of the administrative structure for the Planning and Surveying Department and to review the role of the Municipality in laying down a comprehensive planning procedure for the Emirate of Dubai.

Development of the Planning and Surveying Department

When the Dubai Municipality was established, its Engineering Section was in charge of those aspects of planning dealing with the levelling of land for development, studying the

documentation of, inspecting and surveying land, preparation of maps and registering of land for which ownership deeds have been issued, this work being undertaken in association with the Land and Property Office. In 1960, the Engineering Section was also responsible for implementing city planning, carrying out aerial surveys and a land use survey.

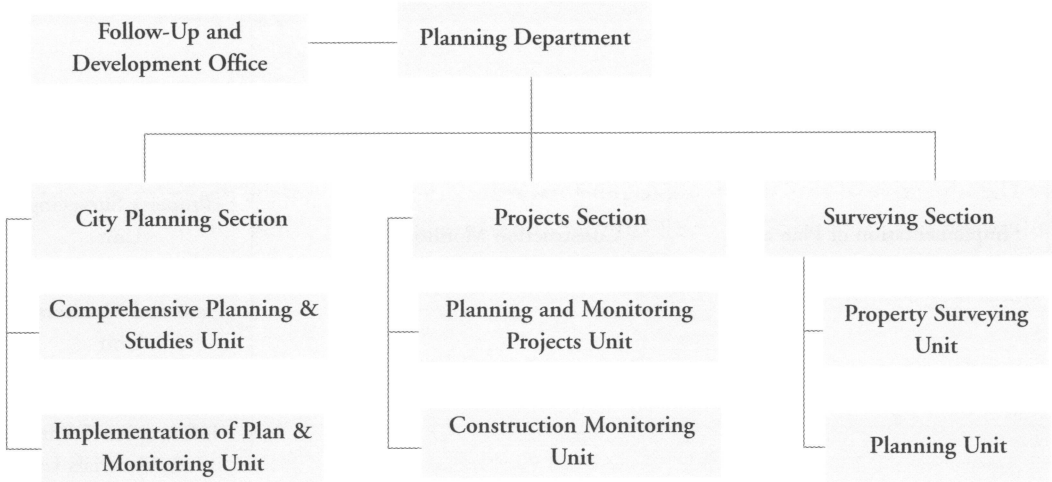
In 1970, the Engineering Section of the Municipality was enlarged to become the Planning Section, with expanded duties. These were carried out through the formation of a group of twelve people who were placed in charge of planning, surveying and supervising implementation of development projects within the city and of updating the master plan. This was undertaken with the objective of laying down the broad outlines for construction in the city and the key areas of growth and designating particular areas for specialised use, as well as identifying the needs of the city for services and public utilities. By 1976, the number of employees in the Planning Section had reached 15, this then increasing to 28 by 1985, as shown in Table No. 1.

Table No. 1. Planning Section employees, 1974 – 1985

Year	1974	1976	1977	1979	1980	1981	1982	1983	1984	1985
Employees	12	15	20	20	21	23	25	28	25	28

In 1987, the development of job functions and the need for technical resources and experience to be available meant that a need for a revision to the Organisation Chart for the Planning Section was identified, along with a need for certain changes to the legislative framework. The next year, therefore, the Section was raised to the level of a Department, under the terms of Administrative Order No. 326 for 1988, to permit it to keep abreast of the rapid development process then under way. This is explained in Chart No. 1, as follows

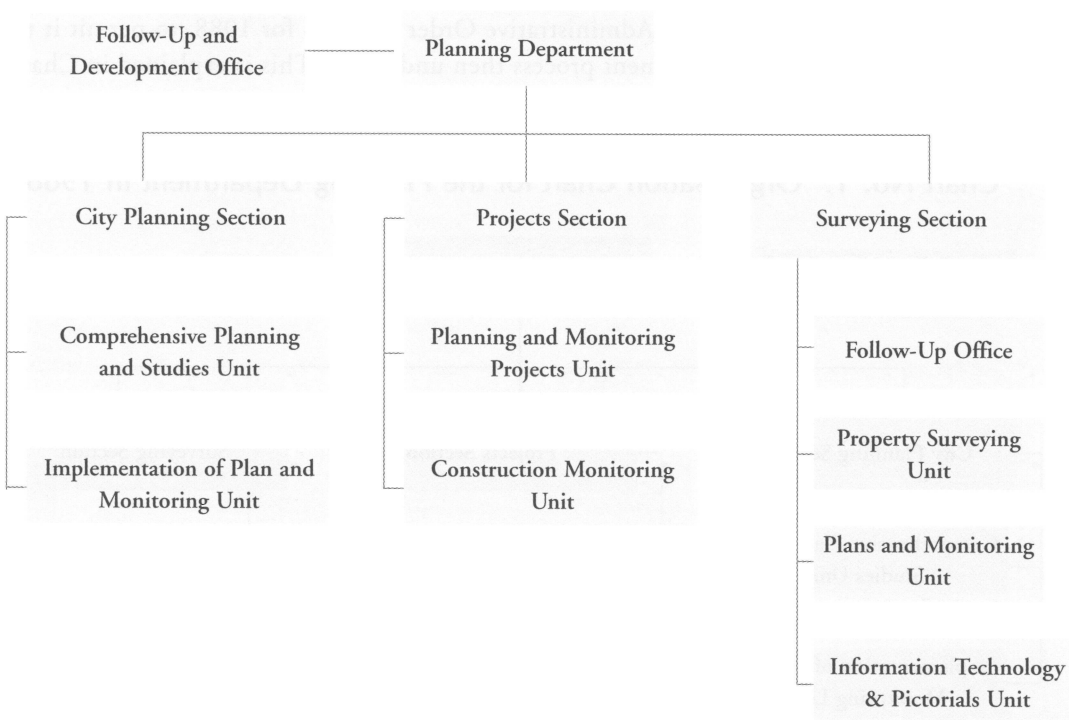
Chart No. 1. Organisation Chart for the Planning Department in 1988



Within the framework of this new Organisation Chart, a follow-up office was established in the Planning Department with the tasks of helping in the provision of services to applicants and of receiving all applications for permits and licences, these then being passed to the relevant sections. Three separate sections were also created. The City Planning Section was assigned the tasks of carrying out detailed studies and of updating development plans, two of the main tasks of the Planning Department. The Projects Section was given the responsibility for designing and carrying out the Municipality's own projects while the Surveying Section was given responsibility for carrying out land surveys, draughting maps, carrying out horizontal and vertical monitoring and surveying properties and public services installations.

In 1991, the Organisation Chart was amended to include within the tasks of the Surveying Section the functions of Surveying, Planning and Monitoring as well as the Information Technology and Pictorials Units. These changes are shown in Chart No. 2. The objective of these changes was to permit the Municipality to carry out the tasks assigned to it in terms of organising, supervising and administering development in Dubai. as illustrated in Chart No. 2, in order to enable the Municipality to implement the role with which it had been entrusted with regard to its organisational, supervisory and administrative functions for the Emirate of Dubai. This is done through effective co-ordination with other authorities and offices in order to carry out a range of activities. These included the plotting of maps, surveys of properties and services, draughting and updating maps, commissioning aerial photography, carrying out surveys of particular areas, preparing drawings for the purpose of planning and development, supplying maps to land-owners in respect of privately-owned and rented land, as well as land given by Government, and keeping a record of all maps, plans and related documents.

Chart No. 2. Organisation Chart for the Planning Department in 1991



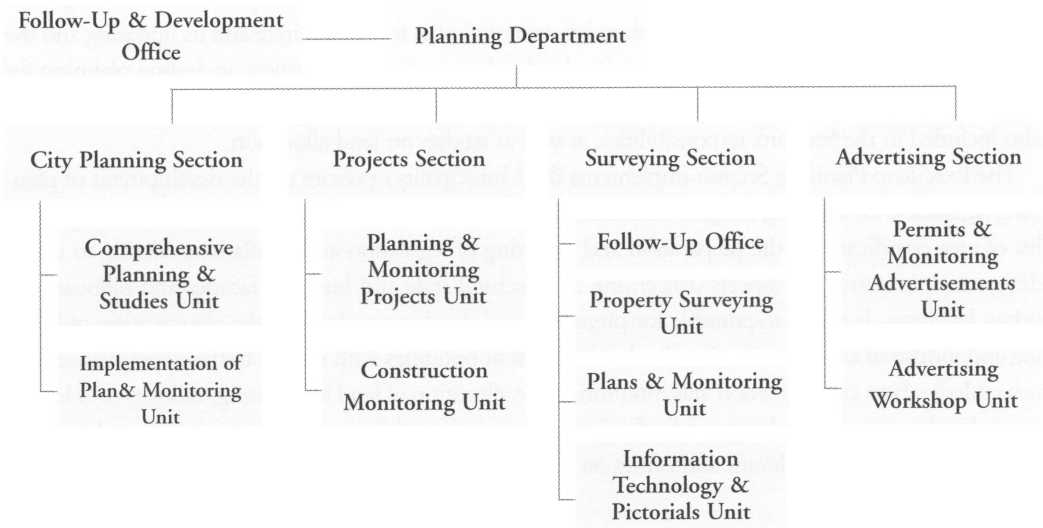
At the end of 1993, in accordance with Administrative Directive No. 574 for 1993, the Advertising Section was transferred from the Commercial Licencing Department to the Planning Department. The Organisation Chart for the Advertising Section was then amended to include the Permits and Monitoring Advertisements Unit and the Advertising Workshop Unit, as illustrated in Chart No. 3. The objective was to implement policies and regulations relating to the monitoring of advertising material, including the methods of display, including billboards and roadside posters, as well as the designs and text.

The Advertising Section, in co-ordination with the Planning and Building Sections, monitors the texts for suggested advertisement designs presented by the public to ensure they are correct in terms of language and are aesthetically pleasing and also carries out daily monitoring of all advertisements in public places, such as pathways, roads and roof-tops, to ensure that they have valid permits. The Section also co-ordinates with the Dubai Economic Department on the receipt and delivery of applications for advertisement permits and on the regular inspection of billboards to ensure that they are in accordance with the aesthetic, construction, cultural and environmental aspects of the city of Dubai. It is also responsible for the imposition of penalties and for removing advertisements without permits, if these are in violation of the Municipality's rules and regulations. The Advertising Section also participates in the preparation of designs for media campaigns and celebrations and is responsible for providing suitable designs for the Municipality's displays at local or international fairs, as well as providing guidance and assistance to the public in respect of the criteria and measurements suitable for advertisement billboards. It also monitors the activities of advertising companies and ensures that they have valid permits, in accordance with the required criteria.

Table No. 2. Planning Department employees, 1989 – 1993

Year	1989	1990	1991	1992	1993
Employees in the Planning Department	219	204	201	239	252
Employees in City Planning Section	7	7	9	10	15

Chart No. 3. Organisation Chart for the Planning Department, 1993



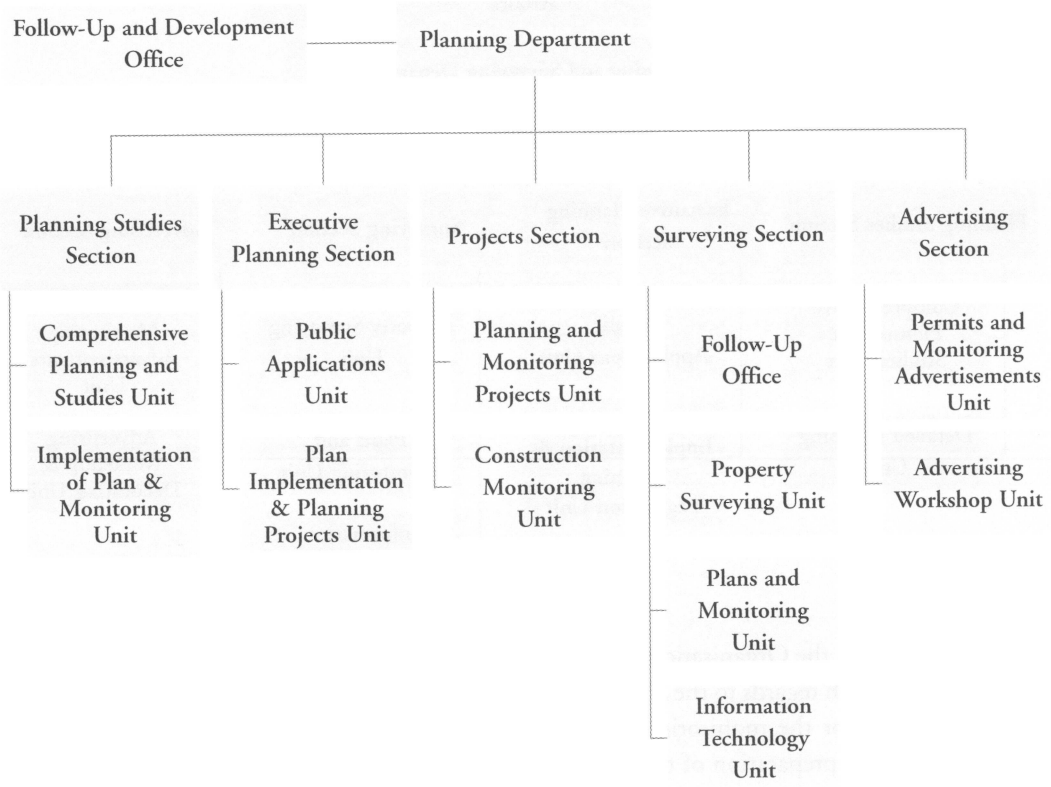
H.H. Sheikh Maktoum bin Rashid Al Maktoum examines the comprehensive structural plan for the Emirate of Dubai

At the beginning of March 1994, two sections, the Planning Studies Section and the Executive Planning Section, were created within the Organisation Chart and the City Planning Section was abolished, as shown in Chart No. 4.

The Planning Studies Section is responsible for implementing the Municipality's policies on comprehensive planning, including social, economic and urban planning. It is also charged with the carrying out of studies to specify the appropriate development policy and strategy on issues such as the Emirate's policies on housing, services provided to the community, policies relating to environmental issues, manufacturing, land use and cultural and social development and for the collation and updating of information. Other tasks include the preparation and updating of a comprehensive long term development plan that reflects the prevailing social, economic, cultural and environmental conditions and that identifies problems that require rapid solution, so as to indicate the areas which require studies to be given a high priority. The preparing of a comprehensive structural plan for the Emirate and its updating and the preparing of a medium to long-term plan for the development of construction, including planning for all types of land use, preparation of detailed plans and the design of new housing and industrial areas is also included in the Section's responsibilities, as well as studies on land allocation.

The Executive Planning Section implements the Municipality's policies on the development of planning legislation for building designs, land allocation, the preparation, development and updating of the list of area classifications, the preparation and updating of legislation and regulations relating to urban design and, in particular, aspects concerning architectural style and building facades and billboards in urban locations. It is also responsible for preparing and developing plans for the classification of housing and industrial areas, monitoring the development of buildings with respect to their compliance with urban design laws and legislation and monitoring the allocation of land for housing, industry and investment. Further, it is required to provide effective services to the public, in response to queries and requests, and to liaise with other relevant authorities on the studying of applications for commercial licences and building licences.

Chart No. 4. Organisation Chart for the Planning Department, 1994.

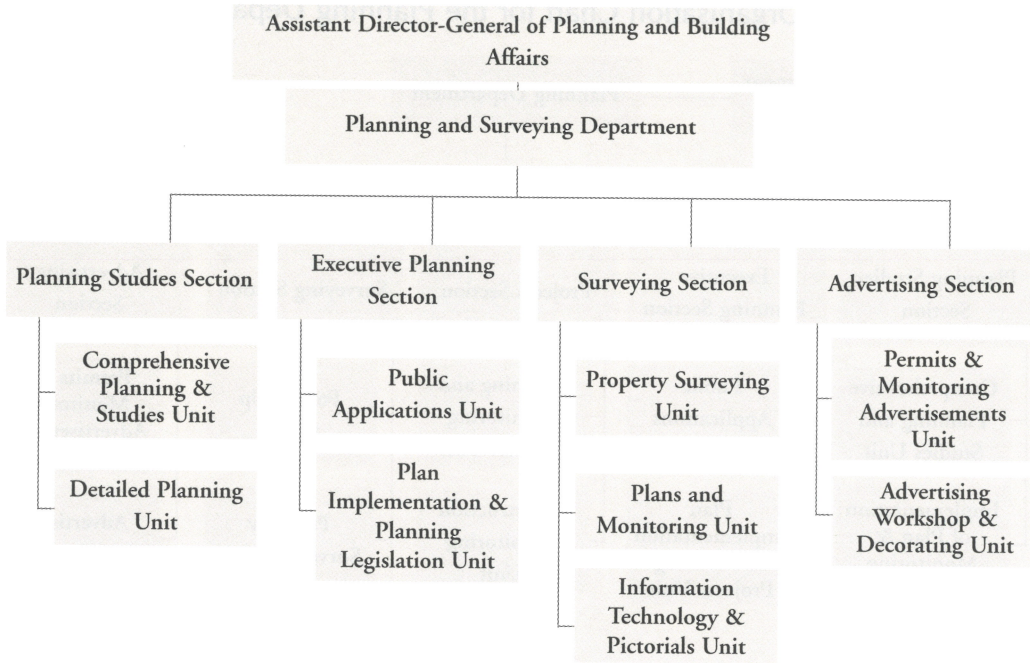


In 1995, as part of the preparation of the urban structural plan for Dubai, a forward-looking organisation chart was developed that took account of the need for a development of job descriptions and of the technical resources and experience required as well as the existing organisation chart for the Planning Department. This involved a re-organisation of the existing department, a revision of its duties and a changing of its name to the Planning and Surveying Department, as illustrated in Chart No. 5. The Projects Section was taken out of the framework of the Department, to become the new General Projects and Maintenance Department.

Table No. 3. Employees of the Planning and Surveying Department, 1994 – 1998

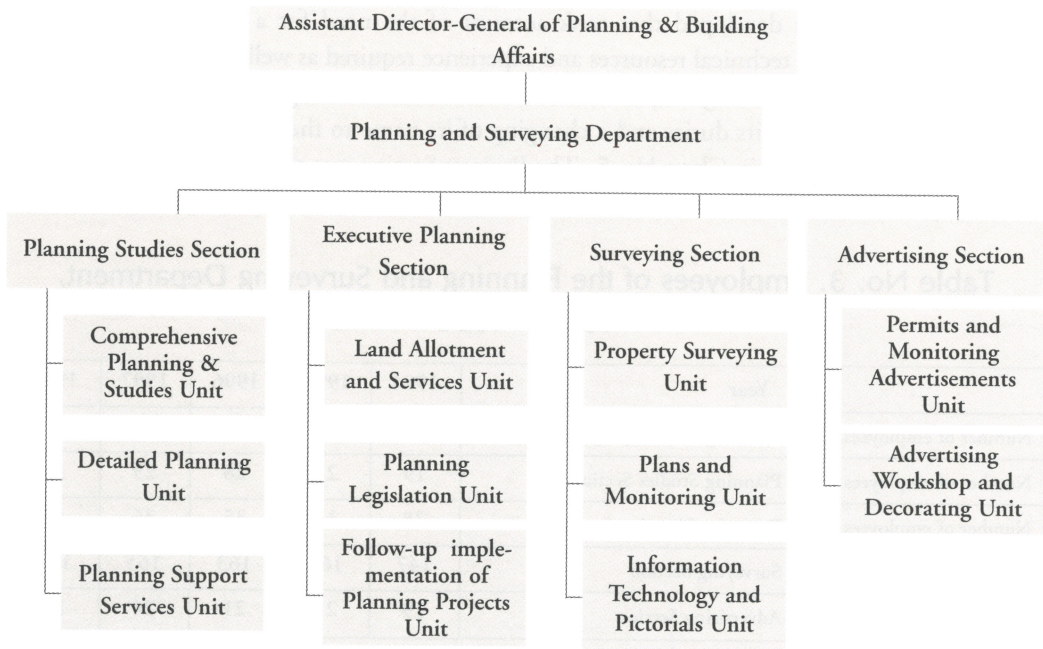
Year	1994	1995	1996	1997	1998
Number of employees in the Planning & Surveying Department	213	243	247	254	259
Number of employees in the Planning Studies Section	19	23	28	29	30
Number of employees in the Executive Planning Section	28	34	35	36	40
Number of employees in the Surveying Section	147	164	163	165	164
Number of employees in the Advertising Section	19	21	21	24	25

Chart No. 5. Organisation Chart for the Planning Department in 1995



In the year 2000, the Organisation Chart for the Planning and Surveying Department was one again amended with regards to the Planning Studies Section and the Executive Planning Section, so as to provide for the monitoring of the implementation of the urban structural plan for Dubai and for the preparation of the strategic plan as illustrated in Chart No. 6.

Chart No. 6. Organisation Chart for the Planning Department in 2000



The above chart shows that the Planning Support Services Unit had been added to the Planning Studies Section to take on the responsibility of responding to all daily urgent technical requests which are not within the scope of work of any of the other Units under the Planning Studies Section. The Comprehensive Planning and Studies Unit, part of the Planning Studies Section, was divided into two groups, one group being responsible for following up the strategic plan and budget in order to revise the projects and investment costs for the Municipality's annual and five year plans and for preparation of the annual urban development plan. The structural plan group was made responsible for the preparation of the planning database, conducting in-depth studies of the structural plan elements, specifying projects within the annual and five year plans and specifying the cost of investment and building development programmes. A Unit was also added to follow up the implementation of planning projects as part of the Executive Planning Section, this to be done in association with the Planning Studies Section with regard to the studying and the allocating of housing, investment, industrial and public services lands and to follow up on the implementation of projects and their effect on the land, as well as the compensation that would be required as part of the urban planning procedure. The following table illustrates the distribution of employees within the Planning and Surveying Department during the period 1999 – 2002.

Table No. 4 Employees in the Planning and Surveying Department, 1999 – 2002

Year	1999	2000	2001	2002
Number of employees in the Planning & Surveying Department	275	265	266	281
Number of employees in the Planning Studies Section	37	38	40	37
Number of employees in the Executive Planning Section	43	43	41	45
Number of employees in the Surveying Section	169	157	156	167
Number of employees in the Advertising Section	26	27	29	32

The main duties and responsibilities of the Planning and Surveying Department and affiliated sections are as described below:

In general terms, the Planning and Surveying Department is responsible for following up on the implementation of the structural plan through the preparation of a comprehensive study of all planning elements, so as to identify present and future planning issues and to lay down the general objectives for each element according to the Emirate's development programme. It is also expected to lay down the general policies required to achieve these objectives. These, in turn, are translated into a number of development projects, for which the investment costs are defined in co-ordination with the technical departments within the Municipality.

The Department is also responsible for updating the five year plan on an annual basis, to cover the next five year period, this to be done in such a way as to identify those areas where development will take place and the particular development projects required. The first year of the plan is used as the basis for preparing the annual investment budget for the Municipality.

It is also responsible for suggesting, and then implementing, once approved, the Municipality's policies, laws, directives and procedures relating to comprehensive development, including social, economic and urban planning, as well as the development of planning legislation relating to architectural designs and to the allotment and survey of land, to ensure that development is carried out in a systematic way.

Another task is that of a regular follow-up of and continual updating of plans related to the comprehensive urban development of Dubai through preparation of a planning database which can be continually and systematically updated in co-ordination with the relevant technical administrations within the Municipality, other Government departments and the private sector.

Within this framework, the Department prepares detailed studies and executive drawings relating to the planning and design of new residential and industrial areas, studies on land allotment, conducting development studies of the city and re-planning of the existing built-up areas, these tasks being undertaken within a framework of preserving existing architectural features that are of historical value.

Development work is to be evaluated, in terms of the solutions offered and the recommendations made, within the light of the Municipality's overall vision and of the Emirate's objectives for development, while the Department is charged with supervising any work, in co-ordination with other concerned parties, with relation to the development of the Emirate's architecture and the implementation of approved plans, this work being carried out in accordance with the approved budgets.

The Department also prepares and implements programmes for the development of its workforce, within the framework of what has been agreed with the relevant section of the Personnel Department.

Quarterly reports are prepared on the work of the Assistant Director-General for Planning and Building Affairs Department, these reports indicating the achievements made in terms of the development plan and the agreed programme of work, as well as identifying any obstacles faced and making recommendations on the procedures required to overcome them, in accordance with the relevant directives.

The Department also carries out a variety of land surveys. These include surveys of properties, preparing of location plans, specifying the borders of plots, matters related to land distribution, advice on specifying the Qiblah (the direction of the holy city of Mecca), making a register of the existing basic services, like roads, water supply, communications links and the sewerage network, this work then being followed by the preparation of the relevant mapping.

It participates actively in the process for approving applications for commercial and advertising permits, ensuring that the applications correspond to the approved plan and planning regulations.

In association with the Personnel Department, it works to implement planning operations and programmes of workforce development so as to ensure that the human resources of the Municipality are sufficient to meet the requirements placed upon the Municipality with regards to development.

Another task is that of ensuring active and effective linkage between the comprehensive

and detailed plans and the existing plans for infrastructure and services, including roads, transportation, sewerage, water, electricity and telecommunications. This involves the arranging of regular meetings with the bodies concerned to ensure that any problems can be satisfactorily resolved.

Finally, the Department is in charge of reviewing and monitoring outdoor advertising in the Emirate and of ensuring that this is done in accordance with the Municipality's policies on the issue and in accordance with the rules and regulations and approved procedures.

Planning Studies Section

The Planning Studies Section is responsible for conducting comprehensive studies in those matters that relate to the specifying of the appropriate development and strategy for the Emirate, including strategies such as those for housing services offered to the community and policies specific to environmental, social, economic, architectural, industrial and cultural issues. This is done through the preparation of comprehensive planning studies for the Emirate of Dubai as a whole, including both the urban and the rural sectors. It also prepares detailed plans and studies to develop various areas of the Emirate, prepares a planning information database, which is continually updated, prepares executive drawings for planning and design of new housing and industrial areas and studies the allocation of land and the specification of particular functions to be carried out in particular land areas.

Executive Planning Section

The Executive Planning Section is responsible for the development of planning legislation relating to building design and land allotment and for monitoring building development in the city to ensure it corresponds to the city plan. This work is carried out through the preparation of planning laws for all types of land use in Dubai, of executive plans, the distribution of lands earmarked for various types of use, the revision of all applications for suggested uses in various areas, the conducting of inspections and the monitoring all types of land use and activities.

It also offers advice to the public with regard to implementation of and queries related to land allotment, monitors and evaluates development projects and encourages private investment so as to ensure that the required facilities are provided, in line with the Emirate's general policy. In this sphere of activities, it also specifies the mechanisms for carrying out approved investment and planning projects and follows up their implementation, in close co-ordination, where appropriate, with other establishments and agencies.

Surveying Section

The Surveying Section is responsible for surveying locations, preparing the drawings necessary for planning, development and operations and other related activities such as compensation, road borders, changes to properties, mapping building plots, preparing other maps, preparation of network grids, land reclamation, making changes form an engineering viewpoint of certain structures and working out the Qiblah (direction of the holy city of Mecca). It is also responsible for the maintaining of a database containing details of properties, land plot numbers and details of landowners.

Advertising Section

The Advertising Section is responsible for monitoring advertising texts, billboards and advertising boards and other displays relating to fairs and exhibitions as well as roadside posters within the Emirate of Dubai. It also examines suggested designs for advertisements to check for the proper use of language, undertaking regular inspections and monitoring the activities of advertising companies and professional signboard writers. This latter is undertaken to ensure that they have the qualifications, artistic abilities, necessary equipment and required permits to practice this profession. The Section also prepares, designs and produces advertising billboards and leaflets relating to the Municipality's advertising campaigns and provide guidance on the approved specifications and measurements for advertising billboards.

Computerisation of the Planning and Surveying Department

Considerable effort has been made on introducing the use of computer technology into the Planning and Surveying Department, to facilitate the planning process.

The process began in 1990 with the introduction of five computers and a computer server to address the task of making digital copies of plans and maps. At the beginning of 1993, this was followed by the introduction of a further three computers for use in the preparation of social and economic surveys of sample groups and to make surveys of land use and industrial areas, in response to needs identified as part of the 1993 – 2012 Dubai urban structural plan project.

In April 1994, trials began on a Geographic Information System GIS, with the preparation of a sample survey of industrial areas. This work was carried out in association with Intergraph, who designed the required software.

In 1994, a further fifteen computers were obtained, these being assigned to map-numbering, while in 1997 fifteen more were introduced, being used to tackle the task of digitising plans for 30 specified urban planning areas, covering a total of 60,000 plots of land.

Building on that success, the number of computers then rose to 250, with increased capacities, permitting coverage to be extended to 115 planning areas, covering 110,000 plots of land.

The data is updated on a daily basis and includes a planning system that permits surveyors undertaking fieldwork to obtain details of the relevant locations on an immediate basis.

Data has also been entered into the system for land use, whether for housing, for commercial use or for other purposes, and relating to the legislation affecting each plot, such as permitted uses, heights of buildings and the distance that must be maintained between the boundary of a plot and any building on it. Computer printouts of maps showing ownership can be produced.

Since 1995, the Emirate of Dubai has been linked to the international ITRF co-ordination network, in association with the University of Hanover.

Also of importance has been the increased use of the GPS (Global Positioning System) facility, which reduces the cost of producing points of control and also speeds up the process of map production, as well as reducing human error. Thus the production of co-ordinates for a single plot of land can now be done in one minute, rather than fifteen minutes, each surveyor can create survey control points at a rate of 14 points a day, rather than the previous 7, plots

can be quickly located and approvals for maps and plans can be obtained within sixty seconds.

Now approval of new plans and maps can be achieved at the rate of one a day, instead of the previous rate of one every week, and the approval of amendments can be obtained within an hour, instead of the whole day that was previously required. The system also makes it possible to obtain information about any particular plot in one minute, rather than in fifteen minutes.

The Development of Construction Planning in the Emirate of Dubai

First Stage: The Stage of Urban Development, 1900 – 1955

During this period, urban development in the city of Dubai was relatively slow, reflecting the rate of economic growth and of population. The majority of the population lived in the Al-Ra's and Shindagha areas of Bur Dubai, at the mouth of Khor Dubai, as shown in the following photographs.

The Khor (Creek), as well as the Arabian Gulf into which it opened, provided an important source of income for the population of the city, through fishing, the pearling industry and some other, limited, commercial activities.

In 1955, the total urban area amounted to only 3.2 sq. kilometres, although this was significantly larger than the 0.2 sq. km of built-up areas in 1900. Over the same period, the population grew from an estimated 3,250 in 1900 to 56,000 in 1955.

Urban Development in 1955

An old picture of the Clock Tower

Second Stage: The Stage of Planned Urban Development (1955 – 1970)

As part of the forward-looking vision of H.H. the late Sheikh Rashid bin Saeed Al Maktoum, Ruler of Dubai, which included recognition of the necessity of planning ahead for the Dubai of the 1960s, the Municipality began the process of planning for the buildings of roads as well as the provision of health services. As part of this, an aerial survey of the city was undertaken and the consultants John Harris and Partners were commissioned in 1960 to draw up a development plan.

In general, the strategy for the development of land use was based on a relatively limited expansion outside the original area of the city, to provide land for additional housing and for industrial use, this being away from residential areas.

The key objective of the planning strategy was to promote the expansion of commercial activity within the central area. The plan suggested, for the first time, the need for a network of roads to be established within the city to meet the rising need for transport, and also suggested that a balance should be struck between the various demands for land, such as residential housing, commercial use properties, industrial areas and utilities and public services. A growth in building development indicators followed, and then the drawing up of the first master plan for the city, laying down the basis of the main axes of development. At this time, in 1960, the urban area covered a total of 5.3 sq. km, with a population of 60,000 and a population density of 11,321 per sq. km.

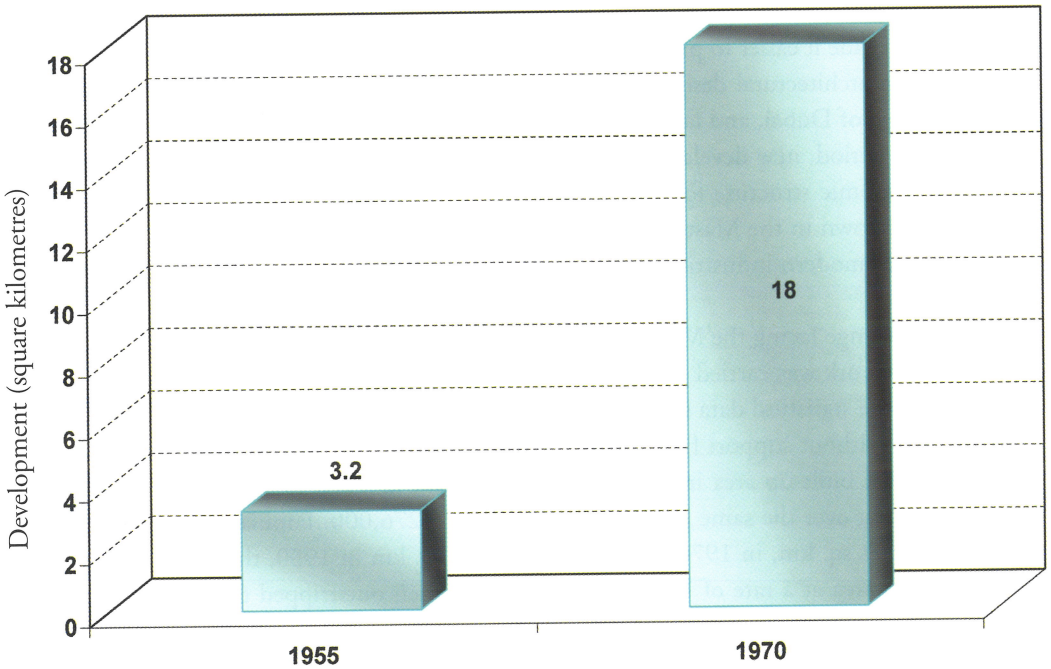
In the same year, the Engineering Section was put in charge of carrying out city planning and for surveying land use.

By 1963, major accomplishments included the completion of new roads, the allotment of land for industry in Deira and Bur Dubai, the allocation of land for schools, public parks and government buildings, the construction of Al-Maktoum Bridge, the allocation of residential plots

of land beyond the built-up areas and the supply of water, electricity and telephone services. The Surveying Section was in charge of aerial surveys and of surveys of land use, so as to help in planning for the locating of new roads and other projects.

Urban Development in 1970

Increase in Urban Development, 1955 – 1970 in square kilometres



The organisation and regulation of the construction industry also began, with the issuing of laws and building regulations. This helped to stimulate construction of high-rise and medium-sized buildings in the central commercial areas, leading to a more efficient use of the available land. Much of this activity took place along the waterfront of the Creek. Other development included the expansion of the road network and the construction of Dubai International Airport.

By 1970, the built-up area had increased to around 18 sq. km, representing an annual rate of increase of 12.2 per cent since 1955.

The master plan was sufficiently flexible to take account of changes in land use, such as those affecting the road network as a result of the construction on major projects like Dubai International Airport, on which work began in 1971, and Mina (Port) Rashid, on which work began in 1972. The plan also paid attention to the need to preserve historical buildings, part of the heritage of the city.

Following the beginning of oil exploration, leading to the discovery of oil offshore in 1966 it was recognised that there was a need to pay more attention to the industrial sector, because of the formation of oil service companies. In 1965, land was allocated for the establishment of the Al Khubaissi Industrial Area, covering 1.2 sq. km., followed by the Al Ramoul Industrial Area in 1969, covering 3.91 sq. km.

Stage Three: The Transitional Stage, 1971 – 1980

During this period, a number of developments took place which had an impact on the planning process and the administration of construction projects.

Insofar as the planning process was concerned, the main changes included the creation of numerous architectural practices and construction companies as well as the carrying out of a number of construction projects being implemented as part of the 1970 Master Plan. One of these was the Al Shindagha under-pass. The rapidly-increasing rate of urban development and other changes made it easier to provide for an absorbing of new ideas in the field of construction and of modern architectural design. This latter aspect was integrated with the traditional architectural heritage of Dubai, and facilitated the preservation of a large number of such buildings.

During this period, new developments in terms of infrastructure as well as the creation of the social and economic structure for the fast-developing city were carried out in accordance with the vision laid down in the Master Plan.

A number of modern industrial units were also set up which helped to transform living standards.

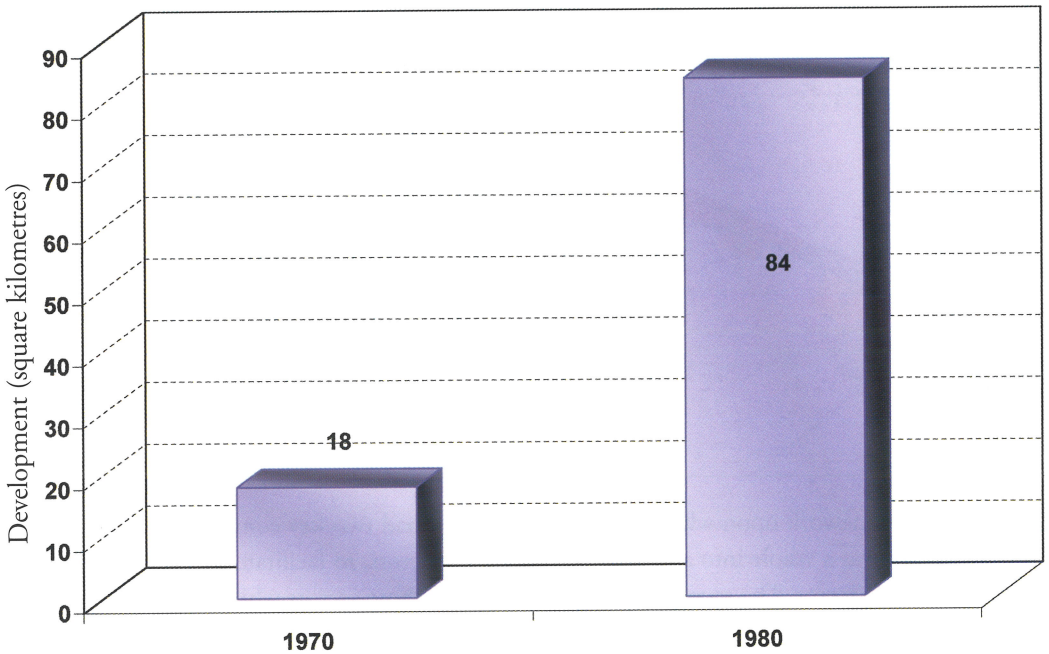
The key challenge facing the Municipality was that of ensuring that the required expansion of the utilities network was carried out, in accordance with expectations.

A review of the statistical data shows the speed of growth within Dubai, which could not have been achieved without support from the Municipality.

Thus the total built-up area increased from 18 sq. km, in 1970 to 84 sq. km, in 1980, the population rising over the same period from 100,000 to 276,000. Population density fell from 5,556 people per sq. km, in 1970 to 3,289 people per sq. km in 1980, thanks to an expansion of the built-up area at a rate of 16.7 per cent a year, which outstripped the rate of population growth, at 10.7 per cent a year over the decade from 1970 – 1980.

Urban Development in 1980

Increase in Urban Development during 1971 – 1980, in square kilometres



Fourth Stage: Start of the Urban Planning Stage, 1981 – 1993

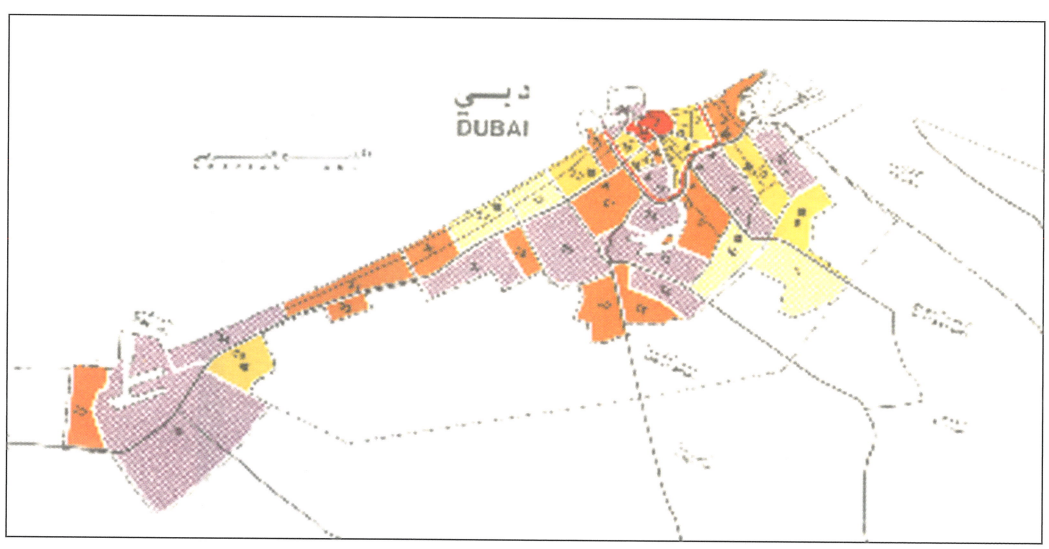
During the 1970s, there was a marked and massive increase in the economy of Dubai, leading to major investment in public utilities and to a significant increase in average incomes. This led, in turn, to an increase in the population and to rising demand for land in the suburbs of Dubai City, where housing policy had previously ensured that a relatively low population density had been maintained.

Other features of the changes included an expansion of the areas used by industry far beyond the residential areas and at a considerable distance from the central commercial area, leading to a reduction in the negative features that arose from the industrial activity that previously took place in these areas. This re-location of industry was fuelled by the provision of public land at low cost.

In 1985, the Municipality commissioned an international firm of consultants to prepare a comprehensive development plan for the Emirate of Dubai up to the year 2005, this work being undertaken under the supervision of the Planning Section. The study commenced with a review of the procedures and plans then in place, followed by a specification of all aspects relating to planning, including its objectives and aims, and the opportunities provided for future development, as well as more general policies for development.

The consultants were also commissioned to draw up a general strategy for the development of the Emirate, to include a re-shaping of the built environment so as to achieve a balance in the distribution of general services and construction throughout the city, as well as to ensure that maximum benefits were obtained from services and public utilities. This part of the study also reviewed ways of reducing the cost of future development.

Urban sectors in the Emirate of Dubai, 1985



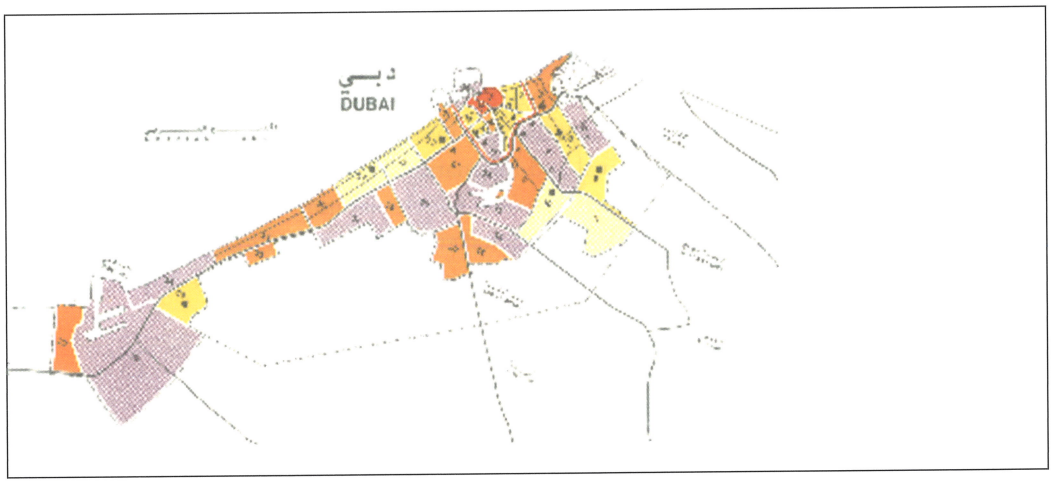
The planning framework upon which the study was based had two key components. The first divided the Emirate as a whole into a total of 37 individual sectors, to facilitate study of the individual needs of each sector. The second component specified those sectors which were to be considered as urban, to help in the planning of the distribution of public services, as shown in the

map which follows.

It was intended that the plan should take into account projections for the future development of economic activity and should also make recommendations related to development policy and to projects put forward for consideration. The map which follows presents an overview of the 1985 comprehensive development plan.

In terms of land administration, a number of key laws and regulations were already in effect.

Comprehensive Development Plan, 1985 – 2005



These included 12 Municipal Orders issued in 1970, covering the construction of buildings and specification of particular areas for land use, the Height of Buildings Law of 1973 and a number of executive regulations.

In 1985, a number of new regulations were prepared and issued, these being seen as important tools to facilitate the carrying out of the development plan. Among them were by-laws classifying areas by type of use, criteria related to land Unit, regulation of advertising and by-laws covering Environmental Protection.

The Comprehensive Development Plan was the first of its kind dealing with forward planning for building development in Dubai which linked social and economic factors with development plans and future needs for planning in the urban area.

Fifth Stage: The Structural Plan for Dubai's urban areas, 1993 – 2015

The completion of the comprehensive development plan was not, of course, the end of the process. It required annual amendment because of the impact of both local changes and developments within the region which had an impact both on the environment as a whole and on planning. Such changes included aspects such as the continued expansion of urban areas and changes to the roads network and to patterns of land use, as well as changes in terms of social and economic factors and population growth and distribution. These all meant that there was a continual need to monitor the process of implementation of the plan so that aspects arising from unforeseen changes which were in conflict with the plan could be addressed and so that the overall development strategy could be preserved.

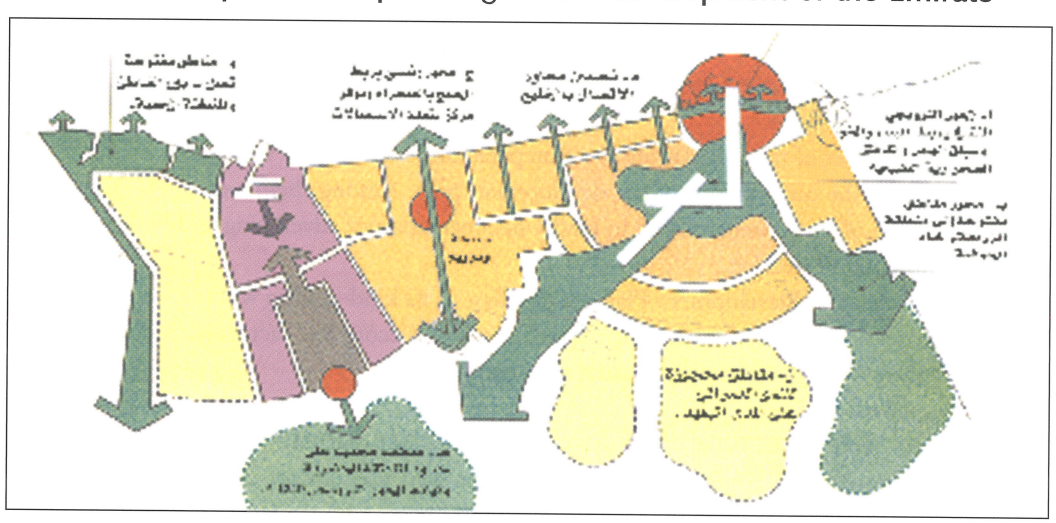
In 1993, therefore, the Planning and Surveying Department prepared a new structural plan for the urban areas of the Emirate of Dubai. One key objective was to ensure that investments in sectors such as public services and utilities were of maximum benefit while another was to create the conditions to encourage private investment.

In accordance with guidance provided by higher authorities, the Department commenced by carrying out detailed studies of each aspect of the planning process and by identifying priority areas, with a view to preparing a long term strategy for comprehensive development. All relevant issues and potential obstacles were identified for all sectors of development while policies and strategies that required immediate or future implementation on a city-wide level were also identified. The structural plan which subsequently emerged was then adopted as an official document to be used as a long term reference for the strategy for future development. This plan was drawn up in such a way that, while remaining comprehensive in scope, it was also sufficiently flexible to permit the rapid changes at a local, regional and international level to be taken into account.

Four functional axes were identified on the basis of which planning for balanced growth both at an urban and at a city-wide level could be undertaken. These were as follows:

- Industrial Axis (Jebel Ali Port – Jebel Ali Free Zone – future International Airport)
- Mina Siyahi Axis
- Ra's al-Khor Axis (Recreational/ Cultural/ Environmental)
- Rural Axis (Al-Khawaneej and Al-Aweer)

Urban components in planning for the development of the Emirate

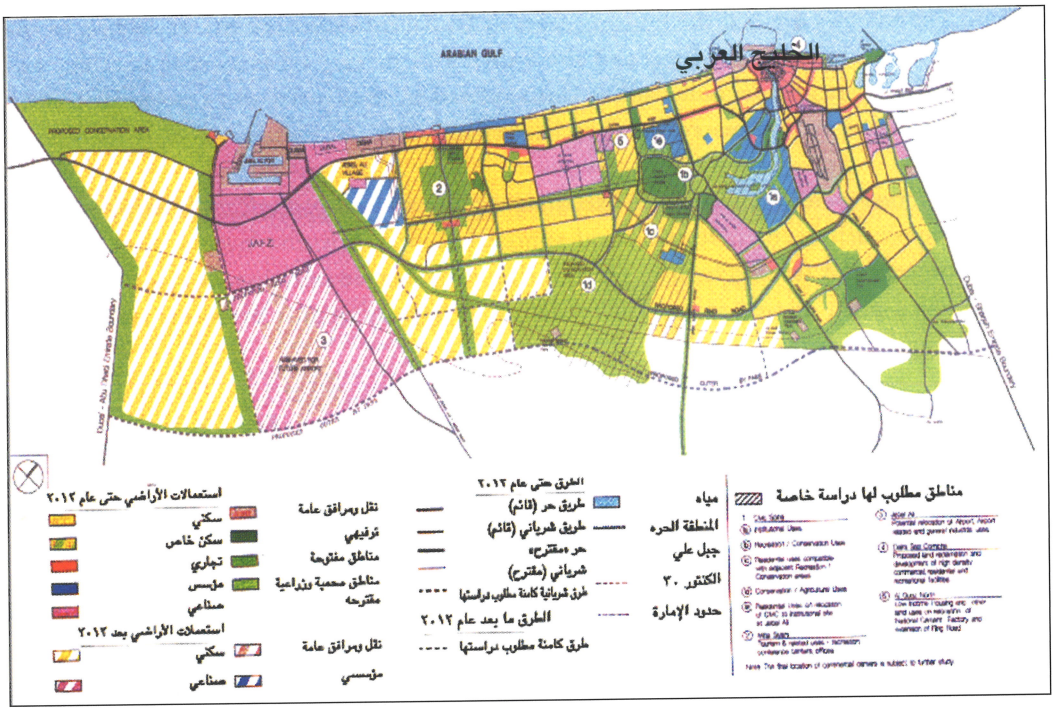


In order to achieve the objectives of the structural plan, a working group was formed consisting of specialists in the field of economics, housing, industry, environment, public utilities, public services, roads, transportation and land use. Each of these aspects included key issues, objectives and policies, and the role of the planning for comprehensive development consisted, therefore, of co-ordinating between and harmonising each sector in the drawing up of policies for the future.

The structural plan for Dubai's urban areas for the period 1993 – 2012 was then

approved, laying down a comprehensive and strategic plan for growth. The following map provides details of the structural plan.

Structural Plan for Urban Dubai, 1993 – 2012



This lengthy period is expected to see a large increase in the total developed area and in population. In 1993, the developed area covered 149.3 sq. km and population was 611,000. By 2012, the developed area is expected to increase to 604.8 sq. km and population is expected to rise to a total of 2.1 million, representing an annual rate of increase of 6.4 per cent. The total workforce is expected to rise to 1.5 million.

If these projections are achieved, then an additional 504 sq. km of land will be required for development of various types by 2012, and one task of the Planning and Surveying Department, in association with other relevant authorities, is to investigate to see whether actual development coincides with the projections.

By 2002, the developed area had already increased from 149.3 sq. km., the 1993 figure, to 220 sq. km, while population had risen from 611,000 in 1993 to 863,000 in 2000. This represents an annual rate of increase in developed areas of 3.9 per cent from 1993 to 2002 and an annual population increase of 4.5 per cent from 1993 to 2000. The largest percentage of developed land is that used for housing.

The rapid rate of development has meant that the basic asset of land must be used wisely, to be of benefit for the Emirate's economy and to sustain economic growth. To support this, the Planning and Surveying Department prepared by-laws on classification and defining land use within Dubai. These provide an importance reference document for decision-makers, and include not only maps of all residential and commercial plots of land but also

provide all of the information relevant to each plot.

The by-laws classified the land to be used for light, medium and heavy industry and also commercial land use by neighbourhood, central areas and the suburbs, as well short term land use types related to temporary housing areas such as workshops and consultants' site offices. The by-laws divided the housing areas in Dubai into nine groups, according to the height of the residential buildings and the location of private villas as well as other residential uses. They also included other Units related to residential and commercial areas, agricultural areas, nature reserves and archaeological sites, in addition to laws relating to car parks.

Also included were legislative and executive aspects and all procedures relating to planning use applications, their revision and approval according to the laws in place, the follow-up process and the mechanism for ensuring their implementation in accordance with the approved plan, as well as an article relating to appeals against decisions made by the Engineering Committee.

Sixth Stage: Implementation of the Structural Plan for Dubai's Urban Areas, 1993 – 2015

Like other fast-developing cities, Dubai has seen major changes since the original approval of the structural plan for the urban areas in 1995. These have included a massive expansion of construction and changes in land use, as well as the expansion of road and utilities networks. This has required the allocation of more land for construction, to meet present and future anticipated demand. In order to keep abreast of these changes and to ensure the implementation of the structural plan in accordance with the suggested objectives and policies, a review of the mechanism for implementing the structural plan was required.

The Dubai Municipality, through the Planning and Surveying Department, therefore prepared a 'strategy and programme for implementing the structural plan for Dubai's urban areas' to permit it to specify the steps required to carry out the plan. Implementation of this required two steps: coordination between the objectives and policies for the structural plan, and the programmes and policies of local and federal offices to ensure that future plans for local and federal offices correspond with the structural plan and, secondly, the creation of a comprehensive planning database based on a large number of planning surveys (social and economic surveys by samples, land use surveys, an industrial areas survey, private sector establishments surveys, a rural areas survey, a comprehensive statistical survey, aerial photography, geometric photography, a survey of urban and rural locations and a general services survey) in addition to a complete geographical survey of the land in the form of maps, aerial photographs and satellite pictures.

Dubai Municipality has also undertaken the following work to facilitate development of the planning process:

- Entering of data on land use, whether residential, commercial or for other purposes, and data on the legislation relating to each plot of land in terms of the permitted uses and buildings

The following table illustrates the expected social, economic and building indicators for the urban areas in Dubai during 2005(*)

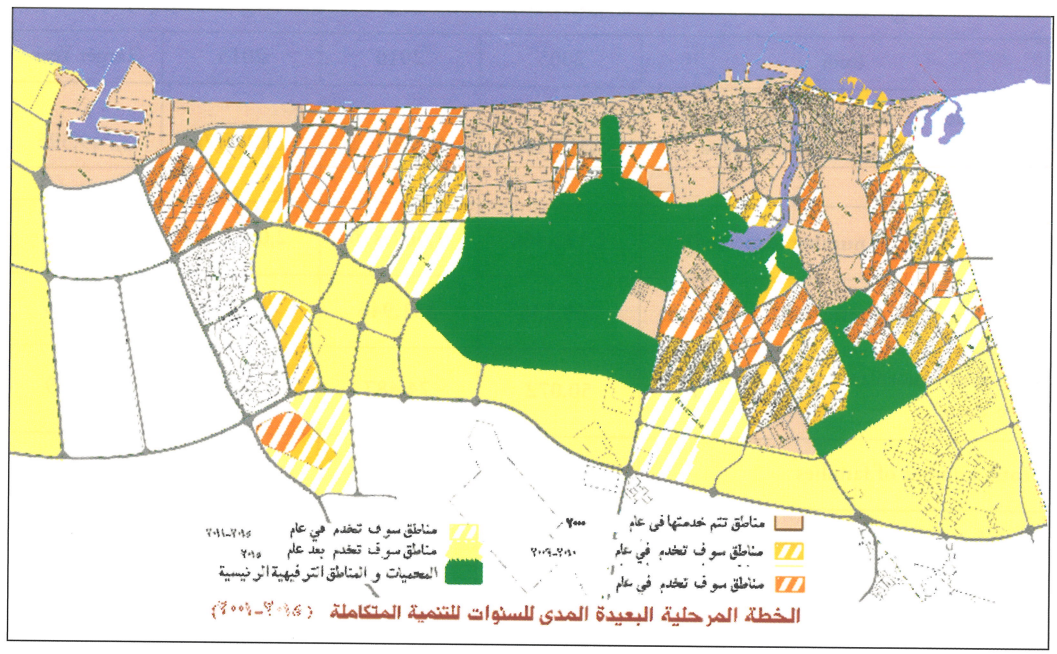
Item	2005	2010	2015	Target Year
Population capacity of urban areas in Dubai, including the Jebel Ali Free Zone	1,317,166	1,748,432	2,287,478	2,749,595
Total population number (expected)	1,192,866	1,567,890	2,065,788	-
Labourer concentrations in urban areas	269,836	351,946	462,789	468,366
Labourer concentrations in the Jebel Ali Free Zone	50,072	74,487	117,077	153,429
Total number of families	233,251	306,011	391,249	444,465
Number of school students	188,021	248,131	322,543	378,150
Total number of workforce	685,332	939,786	1,266,069	1,478,659
Rate of economic growth	6%	6%	5.6%	-
GDP per capita, in Dirhams, at fixed 1995 prices	59,299	72,286	79,808	-
Total areas developed, in square kilometres	244.3	309.1	386.7	604.8
Additional areas required for development (in square kilometres)	110	164	147	-
Population density (Person/ Square kilometere	5,187	5,416	5,681	4,030
Additional industrial land in square kilometres	0	10	10	-

* For the target year, that being defined as the year in which the city's maximum capacity in population is achieved, according to construction laws and present population density within the city.

heights stated on the ownership maps, this data then being printed out on A4 paper, using a new key feature, PID.

- Linking the Emirate of Dubai with the new international ITRF coordination system in conjunction with the University of Hanover.
- The following maps illustrate the long term strategies up to 2015 as well as the five year strategic plan up to 2005.

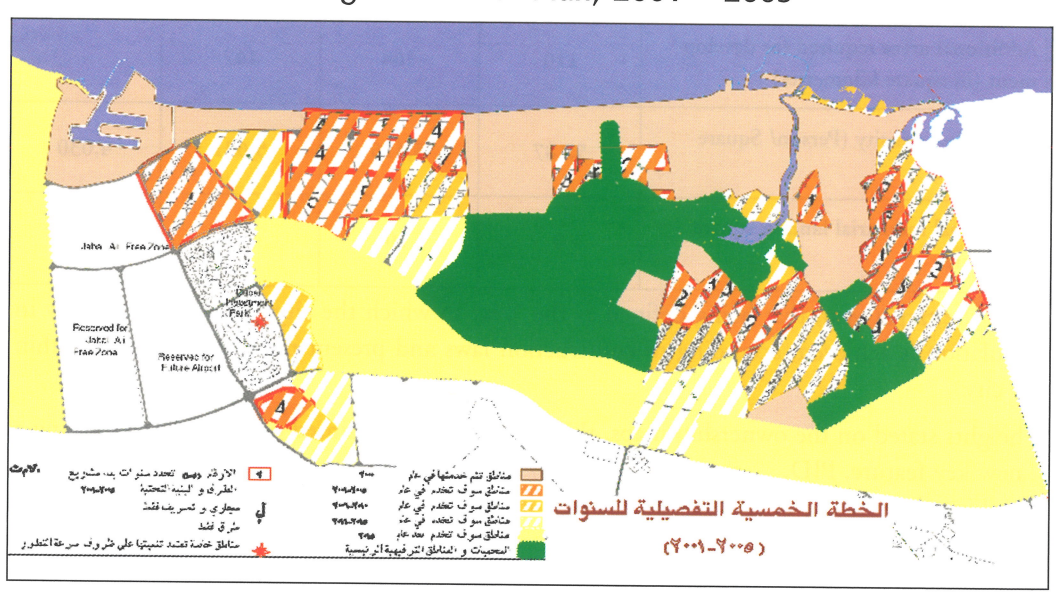
Future Strategic Plan, 2000 – 2015



The areas which will be developed up to 2015 are as follows:

2001 – 2005: 110 sq. km.
2006 – 2010: 164 sq. km.
2011 – 2015: 147 sq. km.

Strategic Five Year Plan, 2001 – 2005



In 2000, the area being provided with services covered 203.9 sq. km., with an area of 244.3 sq. km. to be provided with services by 2005.

The following tables provide the main development indicators during the years 1993 – 2005

Comparison between building development indicators, 1993 – 2005

Indicator	Indicator value in 1993	Indicator value in 1997	Indicator value in 2000	Indicator value in 2005
Area developed (in square kilometres)	149.3	187.8	203.9	244.3
Annual rate of building development	3.9%	4.7%	5.2%	3.8%
Population (in thousands)	611	764	863	1,193
Average annual population growth	6.4%	5.8%	5.1%	5.0%
Number of workforce (in thousands)	218	403	483	685
Average annual growth in the number of labourers	8.9%	7%	6.8%	5.9%
Average annual growth in residential land use	5.5%	8.7%	9.2%	3.8%
Average annual growth in residential/ commercial land use	4.2%	11%	14.1%	7.7%
Average annual growth in commercial land use	5.3%	5.3%	5.6%	3.4%
Average annual growth in industrial land use	5.5%	6%	7%	5.0%
Average annual growth in transportation land use	1.7%	6.1%	7.3%	5.4%
Average annual growth in sports & government services land use	2.8%	0.7%	1.3%	2.4%
Percentage of green areas within the developed areas	1.5%	2.8%	3%	8%
Population density (person/ square kilometre)	4,092	4,308	4,229	5,187
Development of green areas (in square kilometres)	2.2	3.4	4.6	6.8
Green area per person (in square metres)	3.6	4.5	5.3	5.6
Road expenditure portion per person (in Dirhams)	946	786	859	220
Sewerage expenditure per person (in Dirhams)	839	233	270	212
Family average per thousand population	2.6	2.5	2.6	2.8
Average population per doctor	452	435	430	410
Average population per Health Centre	24,400	28,800	30,000	40,000
Average water consumption per person (Gallon/ Day)	98	102	105	110
Average electricity consumption per person (in thousand kilowatt hour/ year)	837	200	290	300

Source: Strategy Programme for implementation of structural plan for urban areas in Dubai 1999, Dubai Municipality

Planning Elements:

Industrial Development

The Dubai Municipality is responsible for the implementation of the economic development strategy for the industrial sector prepared by the Department of Economic Development insofar as the requirements for industrial land are required. The Planning and Surveying Department of the Municipality is directly involved in this process. Land for industry and warehousing is allocated in accordance with the general land use plan, the Planning and Surveying Department having set aside 34.4 sq. km, for this purpose, or 68.5 per cent of the total land area of 50.2 sq. km that is required. 31.6 sq. km. of the land allocated by the Department had been developed for industry by 2002. A total of 36 sq. km. is expected to have been allocated by 2005.

General Services

The Planning and Surveying Department is responsible for evaluating community needs for requirements such as general services and for making proposals for meeting them, in accordance with the specified planning criteria for the Emirate of Dubai. It is also responsible, in collaboration with other concerned bodies, for suggesting suitable locations in which general services facilities can be built. By 2002, 20.5 sq. km. had been allocated for this purpose.

Housing

The Planning and Surveying Department plays an important role in planning new residential areas and in following up on their construction. It is also responsible for preparing strategies and policies related to the future development of the housing sector and for suggesting amendments, if required, to the planning criteria used by other authorities. By 2002, it had allocated 76.3 sq. km. of land for residential and for mixed residential/commercial use, with a total of 82 sq. km. expected to have been allocated by 2005.

An aerial view of Dubai City

The following was the position at the end of 2001 for new residential areas set aside for the provision of housing for Emiratis, as well as for other residential areas in which all plots had been distributed.

No.	Residential Area	Number of plots	Comments
1	Al-Towar	858	Completely distributed (100%)
2	Al-Qusais	480	Completely distributed (100%)
3	Al-Mehaisna (3)	695	Completely distributed (100%)
4	Al-Mizher (1)	1,618	Completely distributed (100%)
5	Al-Mizher (2)	1,336	Completely distributed (100%)
6	Jumeirah (1,2,3) Al Safa, Al Manara, Umm Suqeim	1,575	Completely distributed (100%)
7	Umm Suqeim	3,568	Completely distributed (100%)
8	Al Barsha (1)	169	Completely distributed (100%)
9	Al-Barsha (2)	3,867	Completely distributed (100%)
10	Nad Al Hamar	1,729	Completely distributed (100%)
11	Al Mizher	2,065	High percentage distributed (100%)
12	Al Mehaisna (1)	922	Partially distributed
13	Al Quoz	1,436	Partially distributed. A small section of one block is frozen due to old infra-structure
14	Al Mimzer	603	Partially distributed
15	Zabeel	478	Private area
16	Nad El Sheba	204	Partially private area
17	Al Warqa (1.2.3.4)	5,679	Partially distributed & distribution is commencing under a housing finance programme
18	Oud Al Mateina	2,250	Engineering work is under way
19	Al Barsha South	6,000	Engineering work is under way
20	Nad El Sheba/ Umm Al Hassa	4,132	Engineering work will be implemented later
21	Al Khawaneej	2,650	At the planning stage
22	Al Jumeirah Camp	1,529	At the planning stage
23	Al Wasel	530	At the planning stage

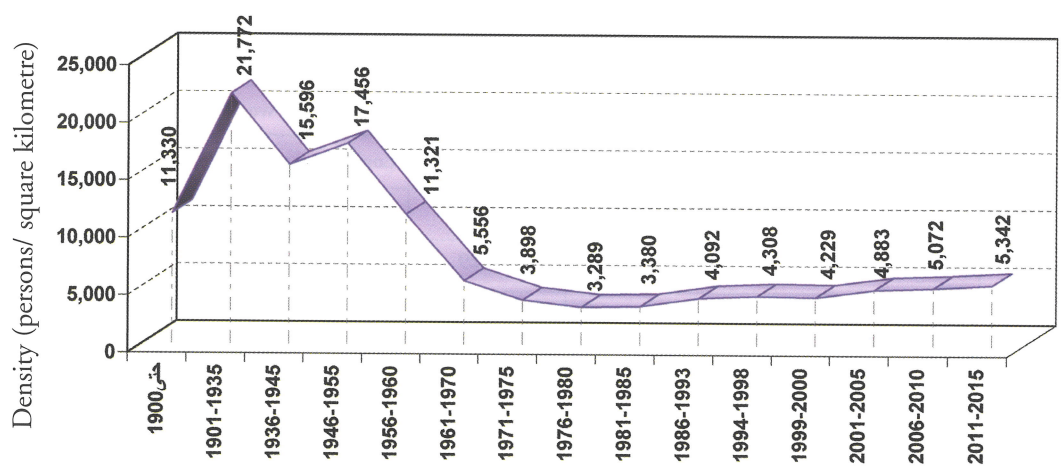
Total number of planned plots in the planning stage	44,373
Total number of plots distributed up to the end of 2001	21,853
Total number of undistributed plots	22,520

A review of the history of the building of Dubai indicates that in 1900, the total built-up area was only around 0.2 sq. km. By 2000, it had risen to over 204 sq. km. and by 2015 is expected to reach 387 sq. km., as shown in Table 5.

Table No. 5. growth of built-up areas and population in the Emirate of Dubai, 1900 – 2015

Period	Area developed in square kilometres	Population	Density: person/square kilometre
Up to 1900	0.2	2,266	11,330
1901-1935	0.8	17,418	21,772
1936-1945	2	31,192	15,596
1946-1955	3.2	55,858	17,456
1956-1960	5.3	60,000	11,321
1961-1970	18	100,000	5,556
1971-1975	47	183,187	3,898
1976-1980	84	276,300	3,289
1981-1985	109.7	370,788	3,380
1986-1993	149.3	610,926	4,092
1994-1998	187.8	809,061	4,308
1999-2000	203.9	862,387	4,229
2001-2005	244.3	1,192,866	4,883
2006-2010	309.1	1,567,890	5,072
2011-2015	386.7	2,065,788	5,342

Development of population density in built-up areas of the Emirate of Dubai, 1900 – 2015 (persons/sq. km.)



As shown in the previous table, by 1960, the built-up area amounted to 5.3 sq. km. By 1980, this had risen to 84 sq. km., an annual rate of increase of 14.8 per cent. By 2002, it had reached 220 sq. km., an annual rate of increase of 4.5 per cent compared to 1980.

During the years 1998 – 2002, the rate of urban growth was 3.2 per cent a year, with average annual population growth over the same period amounting to 6.3 per cent.

The growth in construction and the large increase in the amount of built-up land are among the key results of the process of urbanisation which has transformed Dubai from a coastal town dependent on fishing to a centre of business for the entire Middle East, within a space of no more than twenty years.

From 1986 until 2002, a number of major projects were completed and numerous detailed plans and studies were carried out, to contribute to this process of growth. Among these were:

- The Comprehensive Development Plan for the Emirate of Dubai 1986.
- The Structural Plan for Urban Dubai (1993 – 2015) - 'Future aspirations for Dubai'
- Studying the needs of industrial areas.
- The Dubai Investment City.
- Implementation, in stages, of the Housing Plan.
- Proposed plan for the expansion of the Ra's al-Khor Industrial Area.
- Plan for the Vegetable and Fruit Market.
- Storage of cars for the Ports and Customs Department
- Establishment of the Second-hand Car Market
- The Al-Jadaf Project.
- The project for the development of Al-Deira Corniche.
- The Development Plan for Hatta.
- The Five Year Plan for the Municipality's suggested services up to 2005.
- The suggested road network for 2000, 2005 and 2015.
- Stages of implementing the five year plan for general utilities.
- Recreation and wild life reserves.
- Specification of refuse backfill locations in Dubai.
- Nature Reserves in the Emirate of Dubai.

- Treatment of hazardous waste
- Specification of new locations for quarries and re-planning of areas after cessation of quarrying.
- The University City.
- Al Warqa residential project.
- Planning of Oud Al-Mateina area.
- Planning of al-Khawaneej area.
- Planning of the First Warsan area.
- Planning project for the Nad El Sheba and Umm Al Hassa residential areas.
- Planning for the Al Aweer rural area.
- Re-planning of general services in Shabiyat Al Qusais area
- A comprehensive system for planning land use within Dubai in order to achieve sustainable development.
- Study of the effects of strategic planning on land development policies in Dubai City.
- Structural Plan capacity for Dubai's urban areas.
- Construction development strategy for the Emirate of Dubai.
- Analysis of the present situation and evaluating the future requirements of the Civil Defence.
- Studies of the private and Government schools in the Emirate of Dubai.
- Studies of costs and revenues relating to roads.
- Studies on the effects of traffic
- A comprehensive study of transport in the Emirate of Dubai.
- A study for the expansion of Jebel Ali Free Zone.
- Provision of housing for Emiratis.
- The Environmental Report for the Emirate of Dubai.
- A study and evaluation of general services in Al-Mizher, Areas 1 & 2.
- A study of the general services requirements for Mirdif.
- Evaluation of primary health care services within Dubai's urban areas.
- Proposals for the development of therapeutic tourism in Dubai.

- Re-planning parts of the Al Mamzar and Al Nahda areas.
- Plan for equestrian schools in Al Khawaneej.
- A housing area for low income families in Oud Al Mateina.
- An initial study of the Jebel Ali coastline.
- A study of the Al Abraj area on Sheikh Zayed Road.
- Re-planning Al Khawaneej area and preparation of detailed plans.
- Re-planning of Al Nazwa residential area.
- Re-planning of Al Habab residential area.
- Planning of labourers' residential areas in Ra's al-Khor industrial area 3.
- Planning new industrial area in Hatta.
- Development of Al-Jumeira beaches.
- Engineering work in various parts of Dubai City.
- Engineering work in Al Barsha area south.
- Planning for Al Barsha area south.

Development of Deira Corniche, a part of plans for the future

Transactions completed by the Planning and Surveying Department, 1996 – 2002

Item	Unit of measurement	Total
Public Utilities	Number	34,909
Compensation	Number	4,569
Land amendment work	Number	1,190
Allocation of land for public utilities	Number	2,059
Allocation of industrial land	Number	6,248
Audit of survey maps	Number	41,679
Other industrial transactions	Number	2,384
Legislation forms	Number	9,397
Planning Statement Reports	Number	8,192
Review and audit of building applications by the Building Licencing Committee	Number	49,312
Number of follow up/continuation licences completed by the planning representative from the Economic Develop. Office	Number	180,851
Number of posters	Number	23,770
Number of designs	Number	1,595
Number of three-dimensional displays	Number	101
Number of jobs implemented in the advertisements workshop	Number	8,962
Number of jobs implemented outside the advertisements workshop.	Number	3,811
Number of points read in detailed topographical surveys	Number	469,286
Length of Travosat	Km.	11,978
Number of control points achieved in Travosat	Number	4,714
Length of lines within the balance network of control points (control point levels)	Km.	1,342
Satellite readings	Number	19,334
Number of height points	Number	20,235
Information request for survey control points	Number	7,256
Number of points for specifying road boundaries	Number	3,342
Number of survey control points created	Number	9,357
Maintenance of survey points	Number	37,296
Locating Landmarks	Number	21,254
Specifying the Qiblah (Direction of Mecca)	Number	302
Other Survey Work	Hour	12,540
Specifying Building Plots	Number	11,100
Building Plot Certificates	Number	16,429
Certificates of building plot review.	Number	6,602
Certificates of Completion	Number	10,131
Survey of farms	Number	1,242
Survey for issue of location maps	Number	3,261
Location visits	Number	795
Public Utilities	Km.	884
Planning Amendments	Km.	945
Number of location maps for residential and commercial use	Number	57,162

Source: Annual reports of the Planning and Surveying Department, 1996 – 2002

Contracts and Purchasing Department

The Contracts and Purchasing Department is one of the key departments of the Municipality, particularly in view of the rapid development of construction within the city and the Emirate as a whole. The success of any institution or organisation in carrying out its projects depends to a very considerable extent on the provision of successful administrative support and on its contracts procedures. This requires a proper development of strategies related to contracts, both those of a standard form and others.

The Contracts and Purchasing Department of the Dubai Municipality is the focal point in organising the relationship between external clients, represented by companies and individuals, and the internal clients represented by the various administrative units of the Municipality. As such, it is responsible for inviting tenders, signing contracts, choosing the best contractors and consultants and for avoiding disputes and disagreements on the interpretation of contracts.

It is also responsible for the whole process of preparing and evaluating tenders, for ensuring that the process of selecting winners is transparent and for the efficient administration of the negotiation process. The Dubai Municipality has earned a reputation for high efficiency in terms of inviting tenders and awarding contracts, a reputation of considerable importance, given the fact that many of the contracts are worth billions of dirhams. It is worthy of note that there have been no disputes between the Municipality and its contractors and suppliers, who have clearly developed full trust in the Municipality. Throughout its existence, and, most significantly, during the phase of rapid development from 1985 onwards, not a single complaint or allegation of unfair practice has been received.

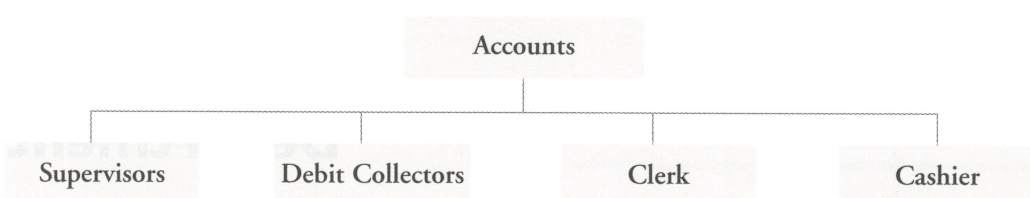
The Department is also responsible for issuing of and storage of all goods and items required by the Municipality's various units, including equipment and machinery.

Looking ahead, the importance of the Municipality is likely to increase because of the introduction of new laws relating to privatisation and, consequently, the creation of joint ventures with the private sector for carrying out new projects. This will require the development of new systems and procedures related to contracts that are in accordance with international best practice and the development of e-commerce.

Development of the Contracts and Purchasing Department

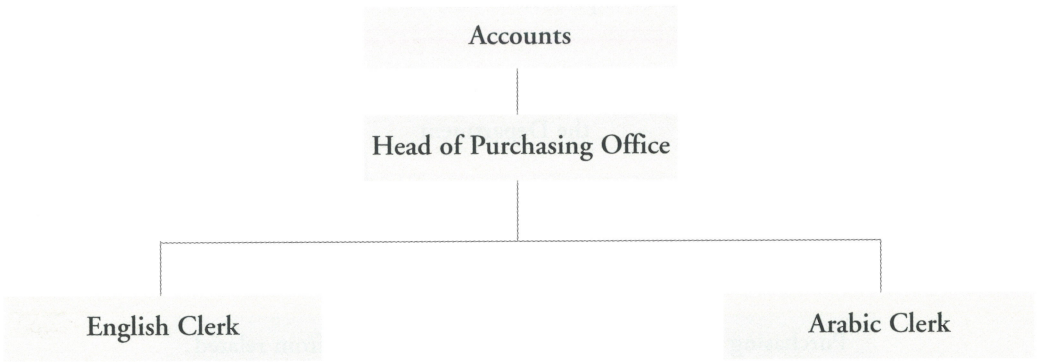
In the early years of the Municipality's existence, the purchasing process was very limited and simple. The task of handling purchases was allocated from time to time to individuals who lacked any specialist knowledge, with a clerk from the Accounts Office being placed in charge of the process, as shown in Chart No. 1.

Chart No. 1. Organisation Chart for the Accounts Office when established in 1957



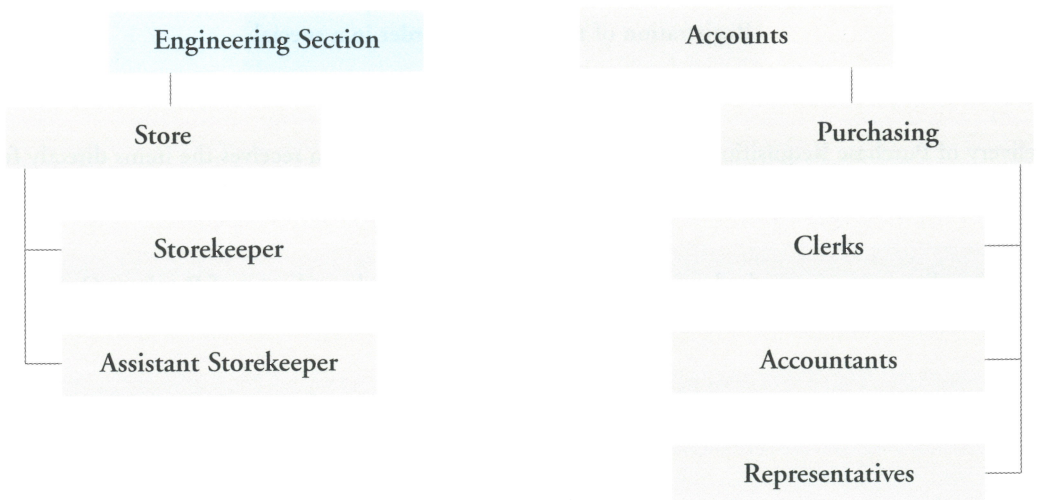
The subsequent development of the Municipality and the expansion of its activities had a significant effect, naturally, on the amount and the diversity of the purchasing that was undertaken, requiring the creation of a dedicated office for the purpose. In 1964, therefore, a Purchasing Office, affiliated to the Accounts Office, was established, with a head and two clerks, as shown in Chart No. 2. At this time, purchasing was only undertaken to cover immediate needs.

Chart No. 2. Organisation Chart for Accounts, 1964



Although the quantity of purchases increased, the expanding activities of the Municipality meant that shortages in some items began to appear. This was addressed by arranging for purchases of more items than were needed immediately, and a store became necessary. This was set up in 1969 and was affiliated to the Engineering Section. This formed the nucleus of today's Stores Section, and had, at the time, a storekeeper and an assistant storekeeper, as shown in Chart No. 3.

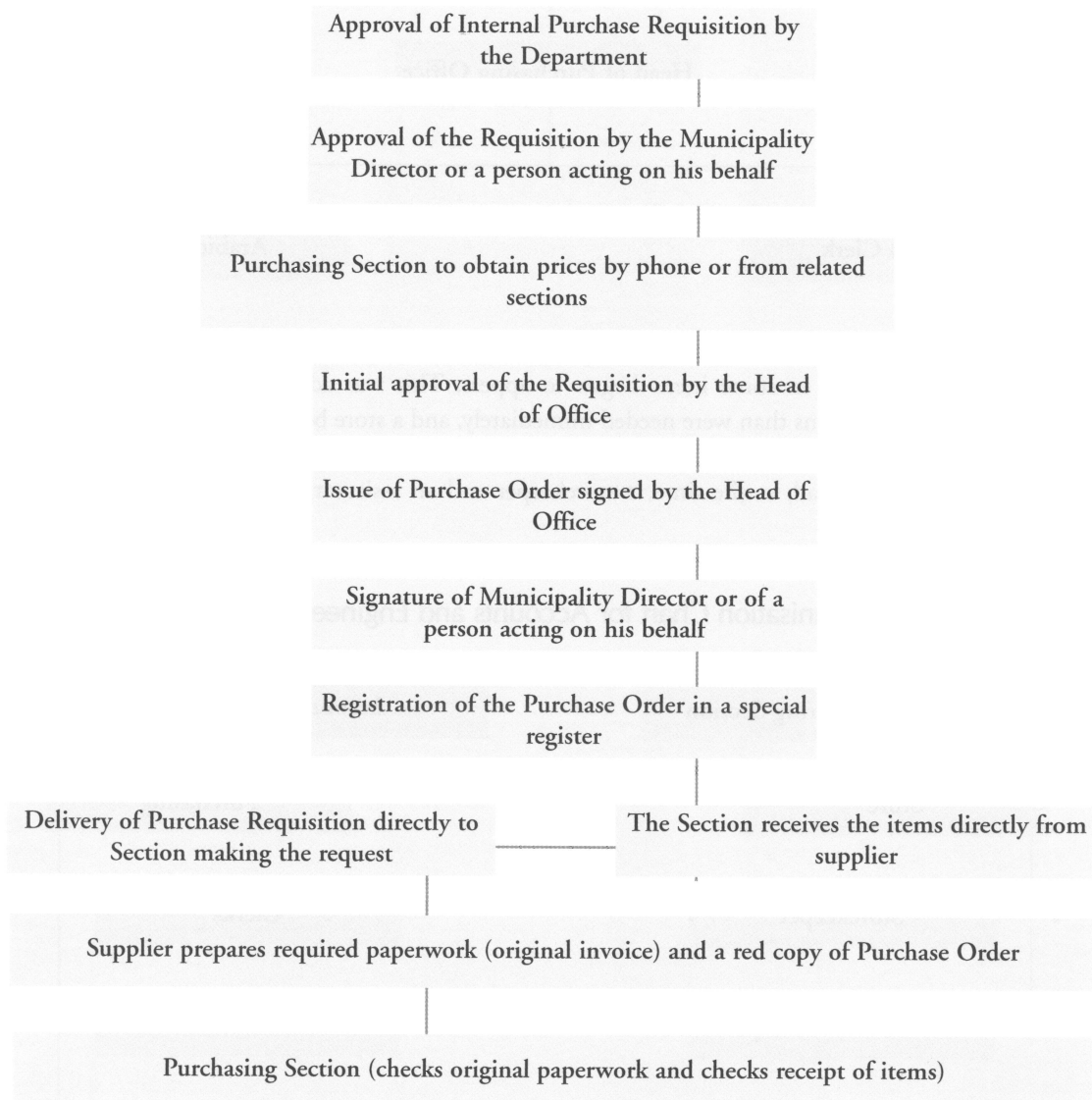
Chart No. 3. Organisation Chart for Accounts and Engineering Sections in 1971



In 1971, the status of the Purchasing Office was changed, it being raised to that of a Section, which remained affiliated to the Accounts Department. It was staffed by a Head of Section, clerks, sales representatives and accountants.

The process of purchasing also developed, with the introduction of more formal procedures. Special Purchasing Forms were designed and approved, while Internal Purchase Requisitions and Municipal Purchase Orders were also created for items needed, making a clear distinction between the party requesting items, the party responsible for purchasing and the party responsible for receiving them from the supplier.

The procedure then in place can be explained as follows:



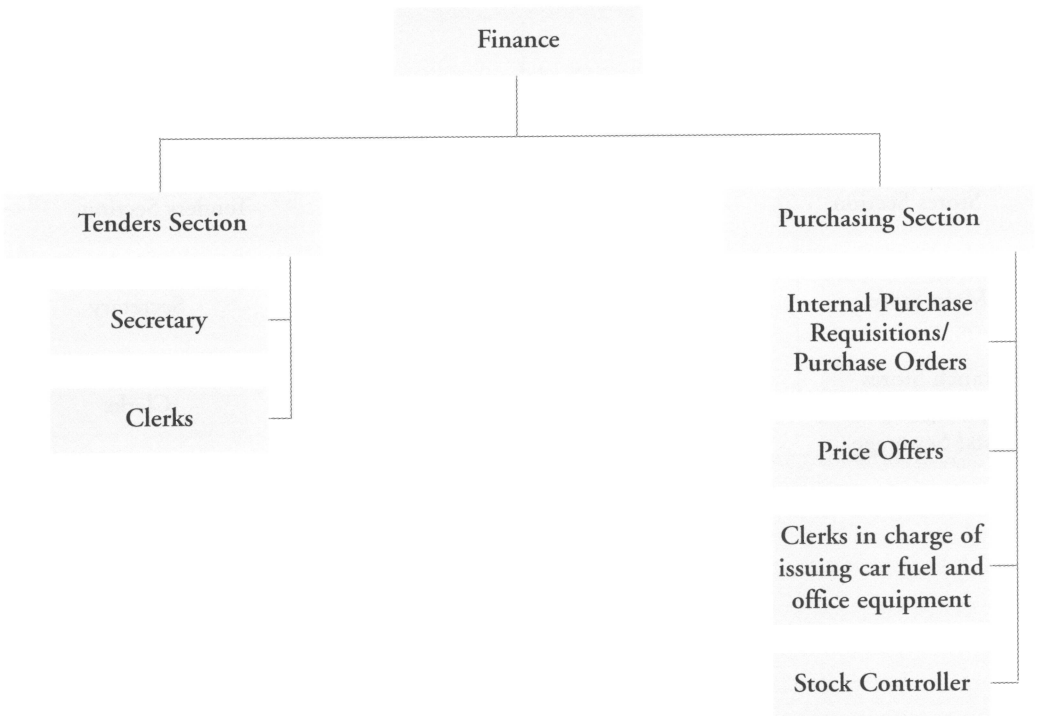
The following Administrative Orders defined the procedures to be followed:

- In 1974, Administrative Order No 65/1974 was issued in respect of controlling and organising the purchasing process, appointing one employee in each department to be responsible for the receipt of purchased items.
- In 1976, the Stores Section was moved to the Accounts Department by an Administrative Order which defined the authority relating to the approval of Purchase Orders as follows:

Maximum authority limits for approving Purchase Order amounts		
Head of Purchasing Office	Assistant Director General of Financial Affairs	Municipality Director and his Deputy
10,000 Dirhams	30,000 Dirhams	Above 30,000 Dirhams

In 1978, a major re-structuring of the Finance Department got under way. An office for Quantity Surveyors was established which was linked to the Engineering Section, and a Tenders and Contracts Section was also established, linked to the Finance Department. This was given the responsibility for inviting tenders and for organising contractual relationships with contractors and suppliers. This is illustrated in Chart No. 4.

Chart No. 4. Organisation Chart for Finance in 1978



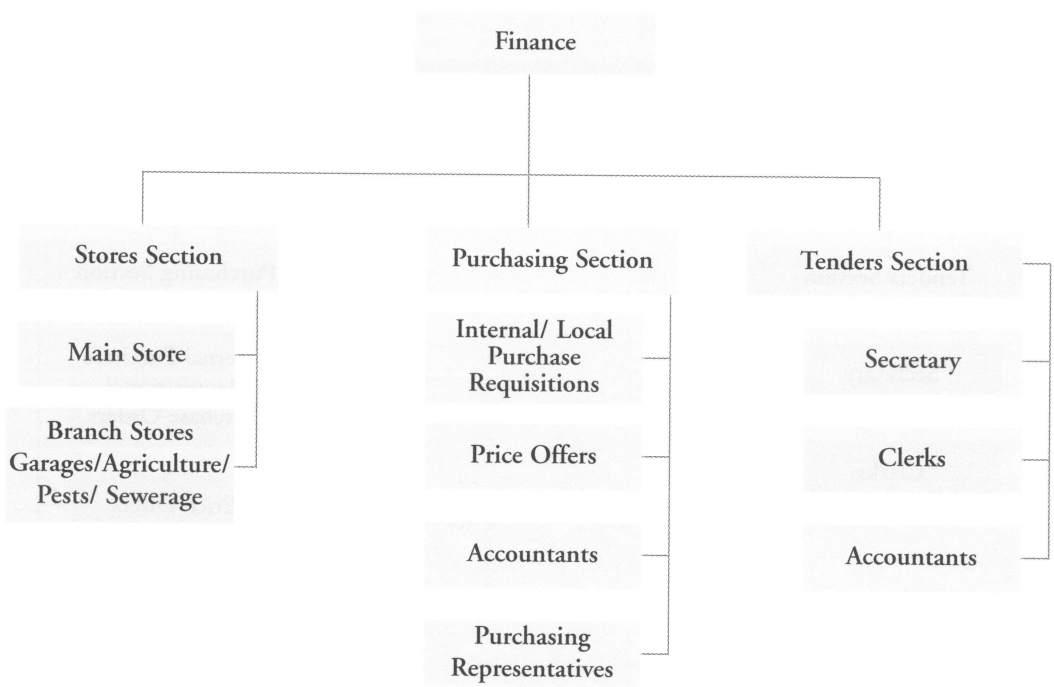
In 1979, another Administrative Order was issued to regulate the preliminary phase of purchase operations, laying down that no less than three quotations must be obtained, each of which must arrive in envelopes sealed with red wax.

On 13th September 1980, Administrative Order 103/1980 stipulated that compliance with the tenders and contracts law was mandatory. The Assistant Director of Financial Affairs was also given some of the authority to approve purchases that had previously been limited to the Director of the Municipality, notably a limit of Dh 50,000 for tenders and Dh 10,000 for direct purchases.

A Purchasing Committee was also established headed by the Assistant Director of Financial Affairs with the Head of the Accounts Section, the Head of the Purchasing Section, the Head of the Tenders Section and the Head of the Section concerned as members. This committee was given the task of making a weekly report on purchase requisitions to the Municipality Director for his approval, following which they were sent to the Financial Committee of the Municipality at the end of each month.

In 1985, the Stores Section, including the branch stores and the Quantity Surveying Section were transferred to the Finance Department. Numbers of employees in each section also increased, these changes being shown in Chart No. 5.

Chart No. 5. Organisation Chart for Finance in 1985



Establishment and Development of the Stores Section

The Stores Section was established in 1969. At the time, it was called the Engineering Store, and was part of the Engineering Section. The store itself was adjacent to the present Clinic and Medical Services Section near Al-Ittihad Square and consisted of a four-room building, in which used furniture, basic building materials and equipment for maintaining buildings and street lighting were stored.

Since there was no single body responsible for all stores, each section of the Municipality also began to establish its own stores, such as the Pest Control Store, part of the Pest Control Section, the Agriculture Store, the Roads Store, the Veterinary Store, the Health Store, the Stationery Store and the Confiscated Goods Store. All of these were subsequently integrated under the Stores Section.

Main Store

The nucleus of today's Al-Rashidiya Main Store was a cement store set up in 1971

In 1976, a Stores Controller, a Storekeeper and a number of labourers were appointed, while in 1980 additional storekeepers and assistants were added, making a total of six employers, besides the manual labourers.

Agriculture Store

This store was established in 1974 at an agricultural nursery in Hor Al-Anz , as part of the Agriculture Section.

Pest Control Store

Established in 1977 as part of the Pest Control Section, it had 3 rooms for the storage of insecticides, disinfectants and spare parts. It was located in the Engineering Equipment Stores, located in the present Municipality employees' car park. Storekeeping was rudimentary, extending only to a simple ledger.

Contracts and Purchasing, 1985 – 1995

The growing amount of Municipality work, along with the increase in the number of its various unit and employees, made it clear that there was a need for re-structuring of the contracts and purchasing procedure. This need was made more apparent because of the fact that there was an evident conflict between some of the Administrative Orders dealing with this work.

With the assistance of the United Nations Development Programme, therefore, studies were carried out that resulted in a number of suggestions for changes in working procedures as well as for the creation of a Contracts and Purchasing Department.

An initial step, on the administrative side, was the recruitment of Dr. Wael Bunni, an expert in financial disputes from the International Arbitration Committee. He was given the task of developing the Municipality's contracts and purchasing system and of preparing an internal 'white paper' on legal contracts. A committee was also formed to study costs and the nature of the existing co-ordination between the relevant organisational units, such as Tenders, Contracts, Purchasing, Stores and Quantity Surveying.

Among key results to emerge from this study was a decision to introduce the use of computers into the Purchasing and Stores Department in 1987. Among items produced on computers were all

Purchase Orders, price lists produced for the Purchasing Committee and statements relating to payments due to suppliers.

In the Stores Section, all items were entered on to a computerised database, being classified and coded according to international norms.

Receipts and Payments Vouchers were issued and recorded automatically, a major step forward in the organisation of Purchasing and Stores accounts. This new system also made it possible to produce reports with ease, something which had not previously been possible, this in turn serving as a first step towards both an expansion of the scope of work and a reduction of cost, as important parts of Department policy.

It also became possible to adopt unified procedures and computer systems in all stores and simplified the procedure of creating new stores in other departments. Thus the Stores Controller became responsible for the Al Rashidiya Store, the Spare Parts Store (Garage), the Pest Control Store, the Agriculture Store, at Hor al-Anz, and the Drainage Store, at Garhood.

The Stationery Store, the Confiscated Items Store and the Scrap Compound were placed under the supervision of Administrative Affairs, while the Property Store, for office and domestic furniture, was supervised by the Personnel Department.

On 6th February 1989, Administrative Order No. 50 was issued, providing for the establishment of a Department for Supplies and Contracts, to include the Purchasing, Stores, Tenders and Contracts and Cost Monitoring Sections, as shown in Chart No. 6. Later in the year, the name of the department was changed to the Contracts and Purchasing Department, under the terms of Administrative Directive No. 333 as illustrated in Chart No. 7.

Chart No. 6. Organisation Chart for Supplies and Contracts Department in 1989

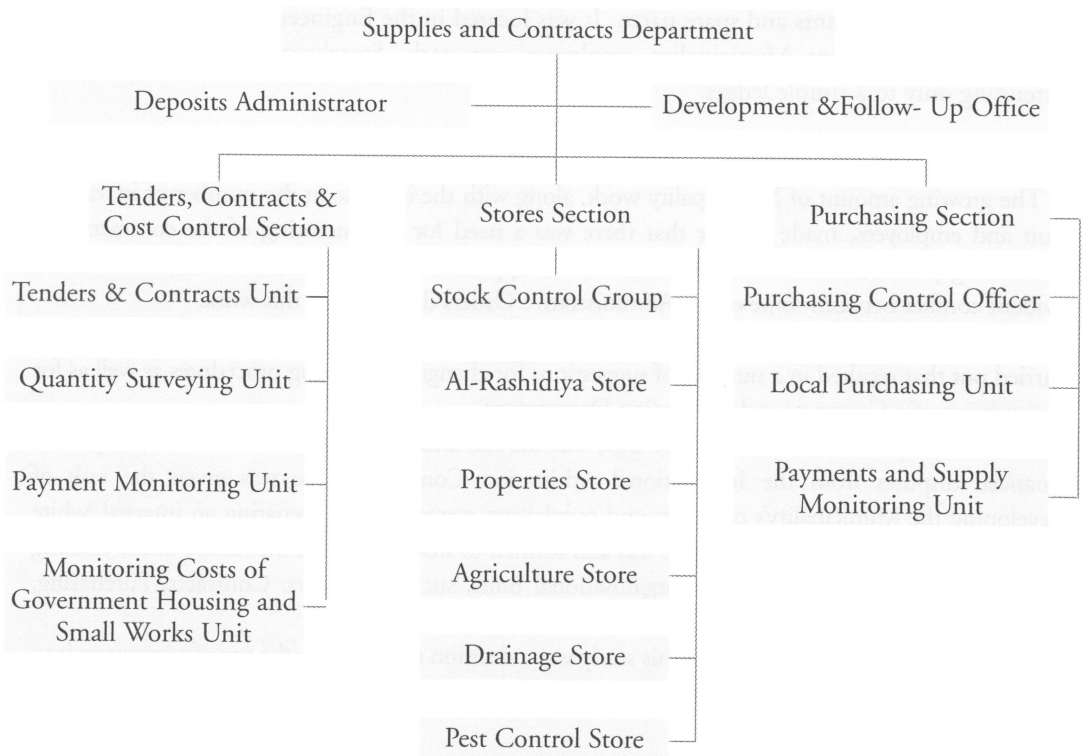
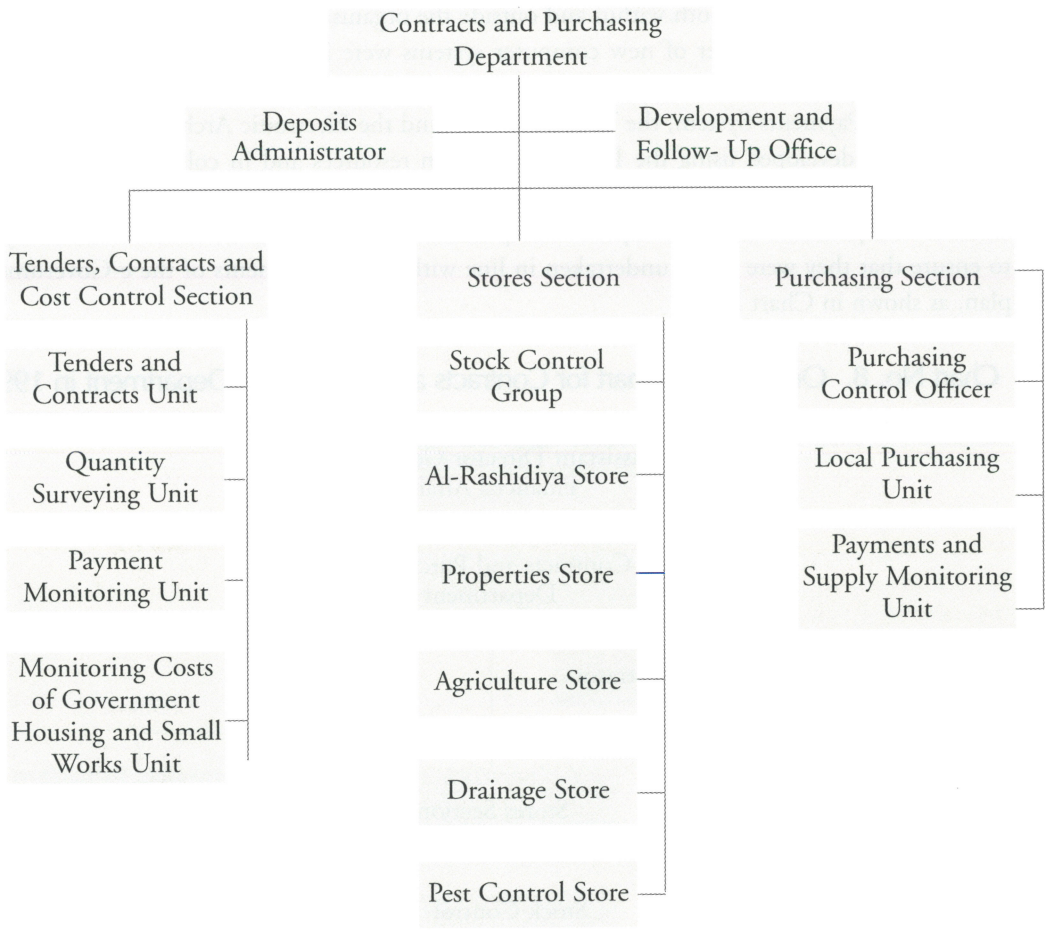


Chart No. 7. Organisation Chart for Contracts and Purchasing Department in1989



In 1990, the Provisions Section was added to the Department by Administrative Order No. 5 for 1990.

The changes in structure led to the introduction of a number of new practices. These included full documentation of work methods, proper co-ordination among the various units so as to address the issues of overlapping responsibilities and authorities and to clarify lines of communication, simplify procedures and unify the system of monitoring work performance. Other steps were taken on the allocation of work and associated costs while the first steps were also taken to introduce a real degree of Emiratisation, by allocating jobs and associated responsibilities to UAE citizens.

Third Transformation 1995 – 2000

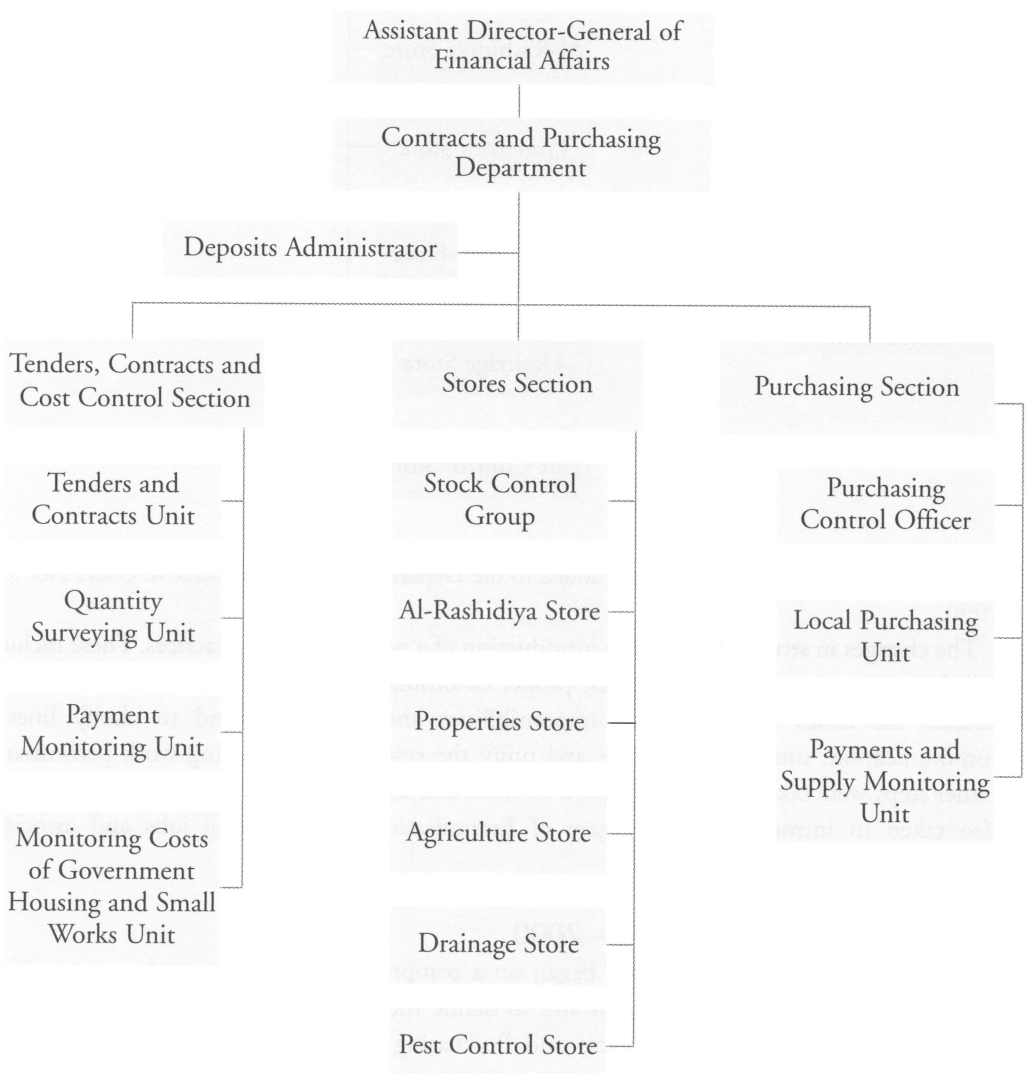
At the beginning of 1995, work began on a comprehensive study to update many of the services provided by the Department and to define the various levels of authority within the organisational units of the Contracts and Purchasing Department. The increased size and

number of projects being carried out by the Municipality, as well as the general increase in Municipality duties made it essential to improve the quality of the services offered to meet the expectations of customers both within and outside the organisation.

To achieve this, a number of new computer systems were introduced. These included the Engineering Projects System, the Purchasing System, the Stores System, the Fixed Assets System, the Financial Payments System, the Tenders System and the Electronic Archiving System.

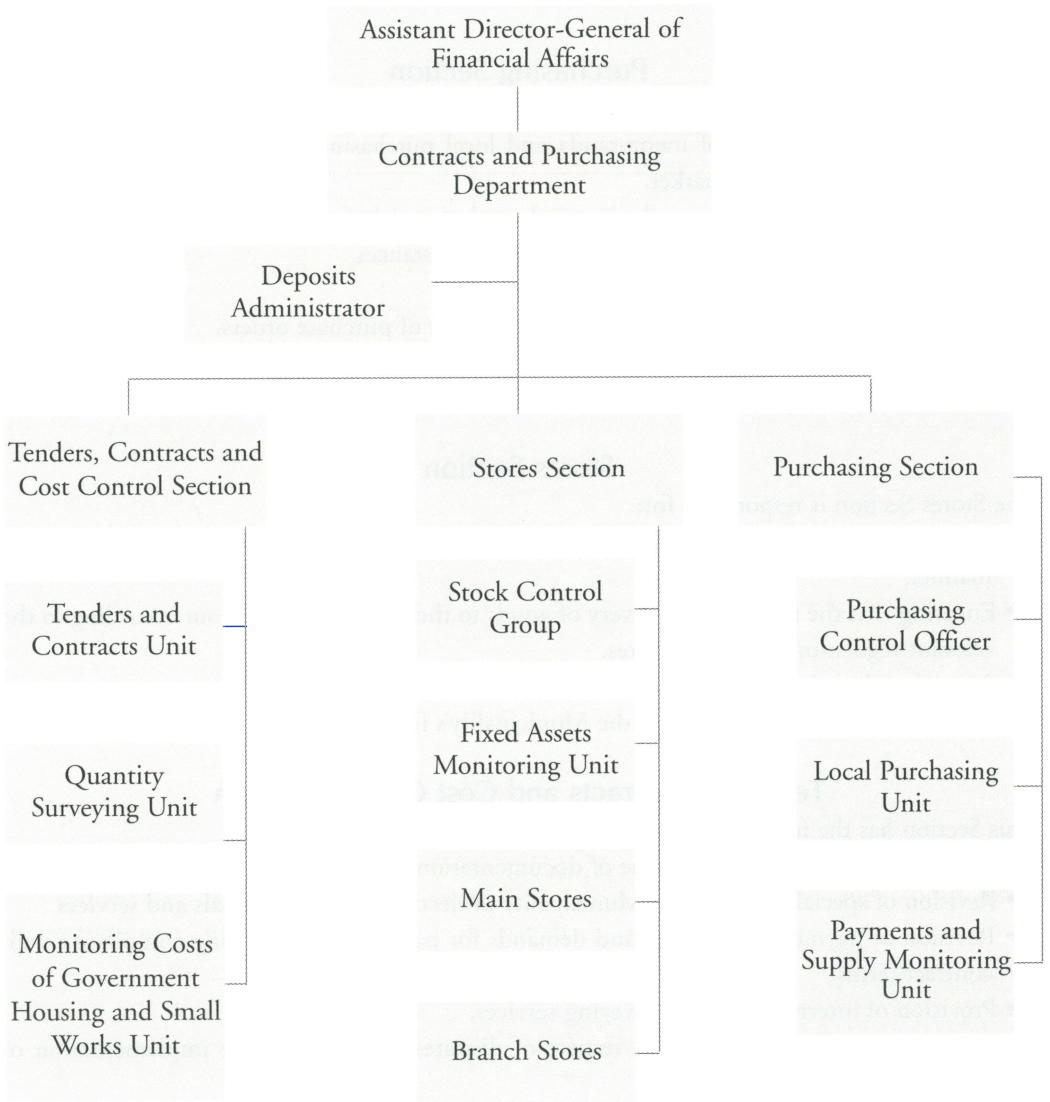
These were developed using the Department's own resources and in collaboration with the Information Technology Department. One key development was the establishment of a master database as a portal of entry, an important step forward in offering all services in such a way as to ensure that they were being undertaken in line with the requirements of the e-Government plan, as shown in Chart No. 8.

Chart No. 8. Organisation Chart for Contracts and Purchasing Department in 1995



In 1997, Law No. 6 was issued to organise the purchasing and contracts process for Government offices in the Emirate of Dubai. This was followed by the issuing of a number of Municipality Administrative Directives to lay down the framework for implementation of the Law. These required minor amendments to the Department's structure, which were made in 2000 in accordance with the terms of Administrative Directive No. 109, as shown in Chart No. 9.

Chart No. 9. Organisation Chart for the Contracts and Purchasing Department in 2000



A work procedures manual was also approved within the Contracts and Purchasing Department in 2001.

The Main duties and responsibilities of the Contracts and Purchasing Department and its affiliated sections

The Contracts and Purchasing Department is responsible for purchasing services, inviting tenders and entering into contracts in order to provide goods and materials for the Municipality according to the specifications required and in a cost-effective manner. It also undertakes quantity surveying, prepares documentation for Municipality tenders for small projects and organises special insurance services for all Municipality requirements.

Other responsibilities include the storage of materials in a proper manner and for monitoring the Municipality's fixed assets, as well as briefing of consultants and contractors working on Municipality projects.

Purchasing Section

The responsibilities of this Section include:

- Preparation and issuing of memoranda and local purchasing orders to obtain goods and materials from the local market.
- Issue of purchasing orders to obtain goods and materials from the external market, when such are approved on the basis of prevailing circumstances..
- Receiving price quotations and studying them.
- Auditing and correcting payments arising as a result of purchase orders.
- Carrying out wholesale purchases after collecting and consolidating requests from within the Municipality that permit such procedures.

Stores Section

The Stores Section is responsible for:

- Ensuring that the Municipality Stores and their contents are maintained in a correct and safe manner.
- Ensuring that the receipt and delivery of goods to the stores are carried out according to the relevant regulations and procedures.
- Arranging the sale of redundant and unused items by auction.
- Monitoring and following up on the Municipality's fixed assets.

Tenders, Contracts and Cost Control Section

This Section has the following responsibilities:

- Revision, announcement and issue of documentation for tenders.
- Revision of special contracts for Municipality projects related to materials and services.
- Revision of payment certificates and demands for payment and ensuring compliance with contract terms.
- Provision of internal quantity surveying services.
- Provision of effective services in respect of disputes arising from the implementation of projects.
- Revision of tenders presented for the Municipality's construction projects and compiling analysis reports.
- Briefing of contractors and consultants and re-evaluating them on a regular basis.

Development of computer systems in the Contracts and Purchasing Department

Stores System

The new stores system, with many new administrative and technical features, was implemented in August 1999 to replace the previous system, which had only a limited capacity and to take over its functions.

It was designed to complement the Municipality's policy of centralising the system, yet facilitating a decentralisation process that permitted the establishment of separate stores throughout the Municipality, whether main stores, parts stores or local, branch stores, as well as creating 'virtual warehouses', for stock control and monitoring of usage in all departments, sections and Units.

Simple procedures, like the WorkFlow process, coupled with an effective authorisation system and data security, allow the Stores Section to control the system fully in terms of setting up and granting permission for procedures such as establishment of a new store, adding a new user and designing new authorities.

The system has two levels of accounting, at the level of both the stores and the administrative units, allowing flexibility, while it is also designed to make it easy to expand the services offered to departments and sections and their affiliated units.

The stores system includes an item classification system and an enquiries process which is specific to the Stock Control Unit. This simplifies the process of monitoring stocks and making the necessary decisions with regard to the purchasing process.

Another feature is a Bin Location System which establishes and defines the stock available in each store and which is linked to the geographic information system, GIS.

A duplicate balance system incorporates an instant balance system, which has both an approval feature and a feature to cancel approvals, providing for flexibility in the case of mistakes, and also a system of balances carried forward.

Able to produce high quality reports, especially with regards to administrative information, the system is easily linked to other computer systems in place, such as the Purchasing System and the Vehicle Maintenance System, and has technical features that permit the establishment of effective inter-facing with other technologies such as those used in the archiving system and the bar code system.

Purchasing System

Implementation of the Purchasing System began in 1999. It has been of very considerable help in introducing the system of e-purchasing which was launched in 2001, permitting employees to request and receive authorisation electronically for purchase requirements and requisition orders.

The System is electronically linked to various Municipality sections, including the Stores Section, permitting purchasing requisitions to be prepared electronically and at a distance, a feature of particular importance, since the Municipality has a total of around 150 work locations, spread throughout the Emirate of Dubai.

People requesting an item fill in a form on their computer screens and transmit it

through the computer network to an employee authorised to give approval, following which it is forwarded to the Technical Department, if any technical items are required, and then on to the Stores Section. There the item is checked against the stock available. If it is not available, following the receipt of approval from the Stores System, the Purchasing Section reviews the request. Automated approval is then given by an authorised employee from the Contracts and Purchasing Department and the requisition is sent to specialised companies on the Municipality's list of registered suppliers, for quotations to be obtained. After these are received and opened, the requisition is then transferred by computer to the Budget Department, for a financial commitment to be made, following which a Purchase Order is issued, this, once again, being approved electronically.

Benefits of using the system

The system produced a number of major benefits for the work of the Department.

It was possible, for example, to reduce very substantially the amount of time required to audit purchase requisitions, since enquiries relating to the requisitions, prices, the purchase order, the statement number or document number could be made electronically.

The enhanced accuracy arising from the electronic method of creating, storing and checking information meant that there was a marked reduction in mistakes made due to human error while the use of paper was dramatically reduced, helping to implement the department's policy on this aspect of its work.

All data related to purchasing is now produced by a unified method and system, while the electronic form of storage not only increases efficiency but also reduces the amount of space required for paper files.

The simplicity of data retrieval by computer has also facilitated the production of reports, both in terms of speed and of accuracy, while less manual work is required in auditing and revision of documents.

The links established with the stores system made it easy to check the availability of items in stock while there were also cost savings since employees no longer needed to travel between their places of work and the department's offices such as the Stores Section and the Purchasing Section.

More generally, the system made it easy to collect information on purchases at Unit level within each department and helped the departments themselves to follow up on their purchases and to monitor their expenditure in relation to their budgets. The overall saving of the time and cost related to purchase requisitions proved to be beneficial throughout the Municipality, while the new system also made it easy, at every stage of a purchasing process, for requisitions to be returned to their initiators to provide information on whether they had been rejected, amended or approved.

Finally, the system was designed in such a way to make it easy to link it to the Internet.

Manpower and the Emiratisation of jobs

Between 1975 and 2002, the number of employees in the Contracts and Purchasing Department increased considerably, in line with the general growth of the Municipality's work and workforce. The graph below shows this expansion in manpower.

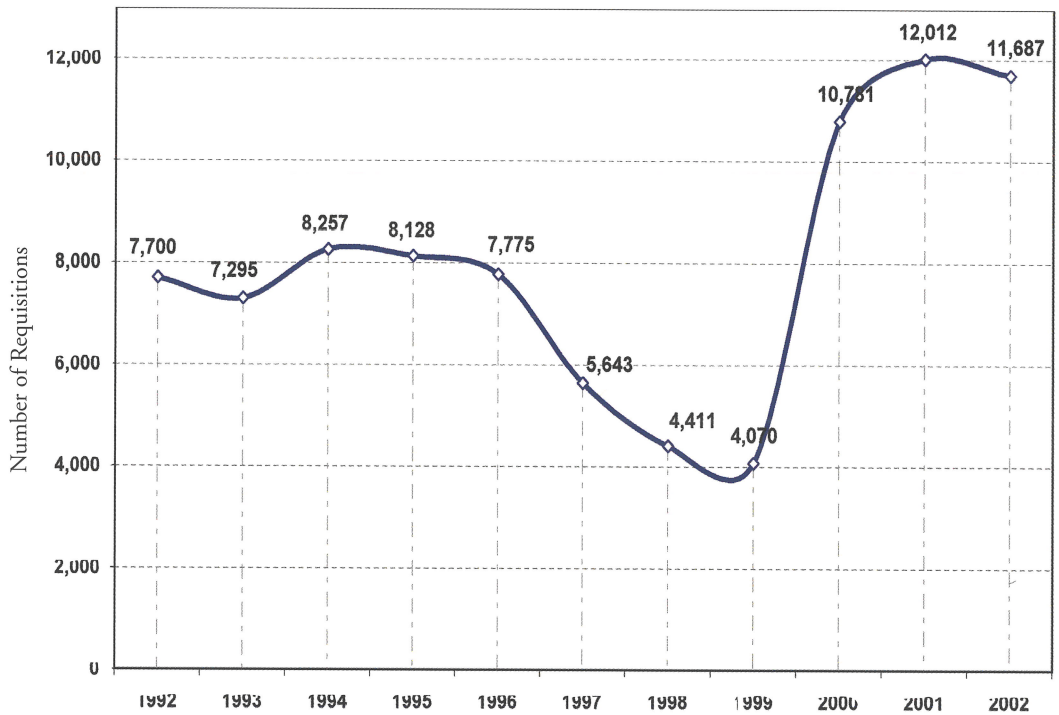
By 1999, the percentage of Emiratis in the Department had risen to 39 per cent, higher than the target. This has been achieved as a result of a special programme designed to train Emiratis in a number of fields where, in 1995, an Emiratisation programme had been difficult to implement because of the lack of trained personnel and because of the fact that there were no courses of higher education dealing with these particular fields. One such type of work was quantity surveying, and, to tackle this deficiency, the Municipality started a programme of training Emirati graduates in local quantity surveyors' offices. Successful discussions were also held with the Higher Colleges of Technology on the introduction of special courses while agreements were made to send Emirati students to study quantity surveying in several Australian universities.

The Contracts and Purchasing Department workforce in 1999, showing the percentage of Emiratisation

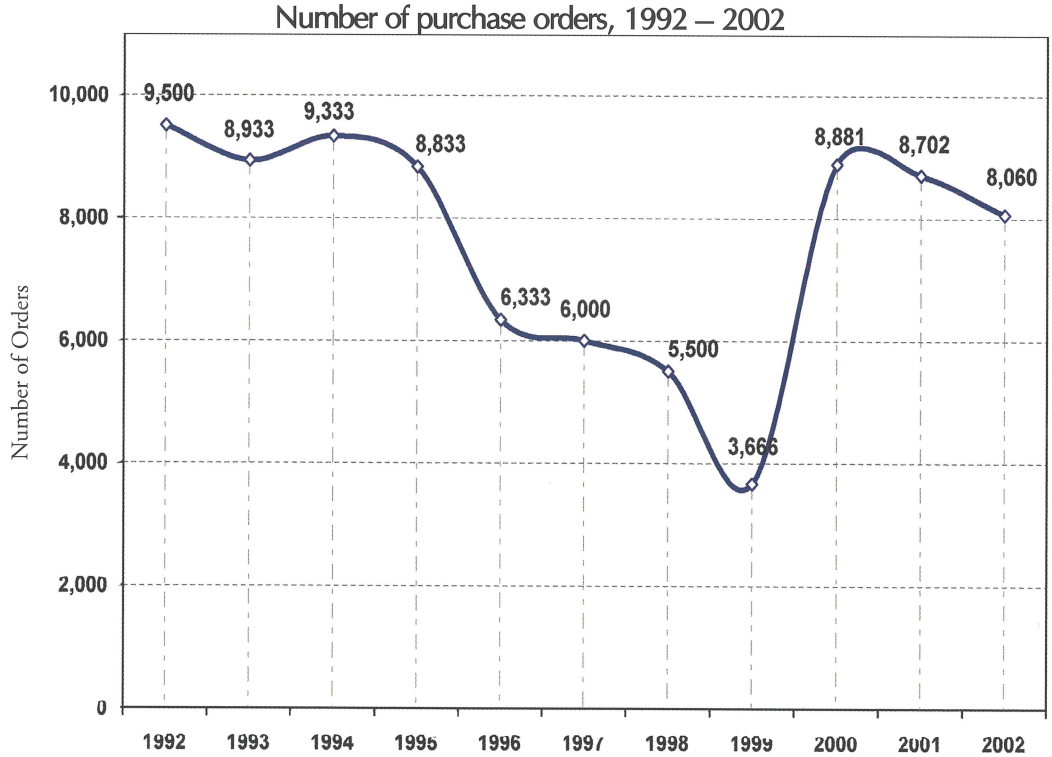
The Contracts and Purchasing Department workforce in 1999, showing the percentage of Emiratisation

Section	Emiratis	Expatriate	Total	Percentage of Emiratis
Contracts and Purchasing – Administration	8	4	12	67%
Purchasing Section	14	12	26	54%
Stores Section	18	50	68	26%
Tenders, Contracts and Cost Control Section	13	17	30	43%
Total	53	83	136	39%

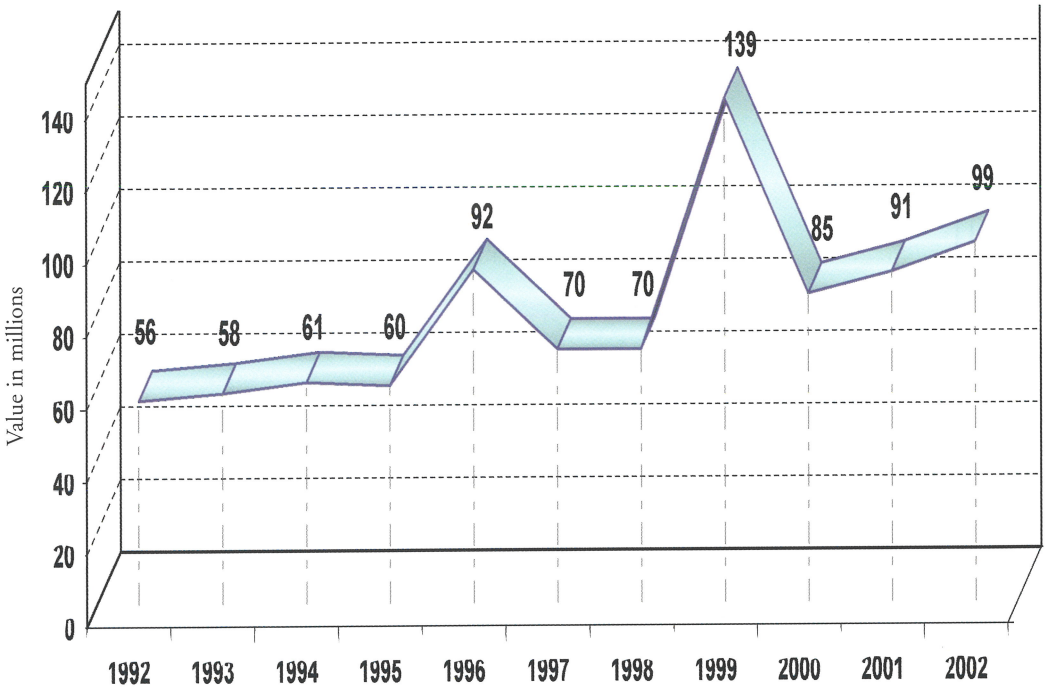
Number of purchase requisitions, 1992 – 2002



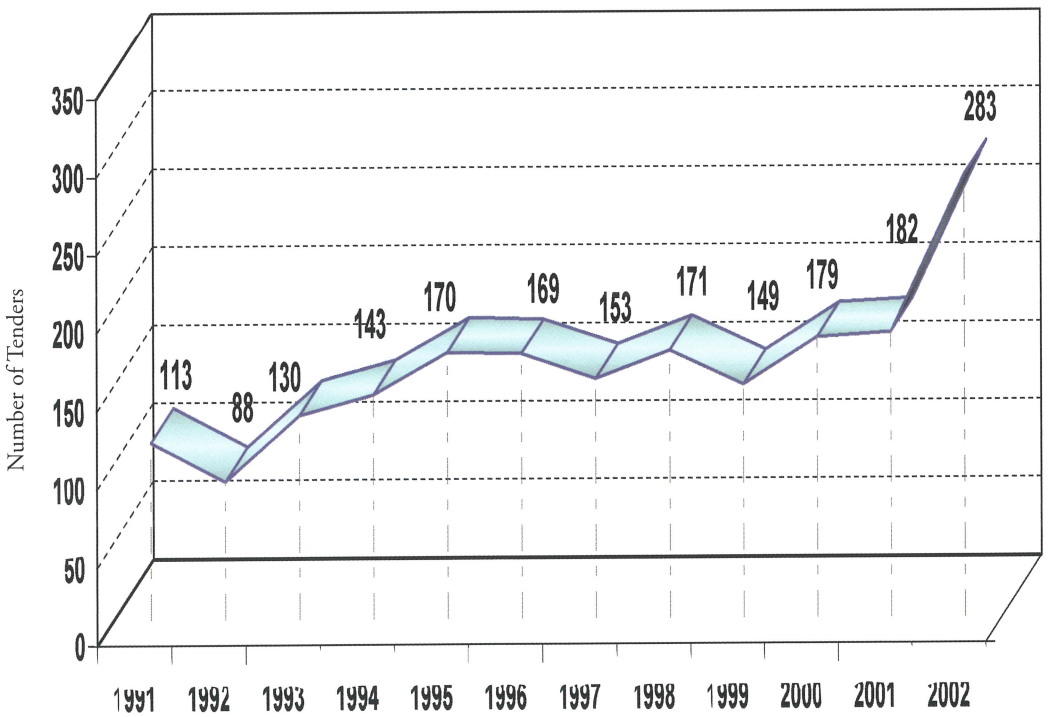
Number of purchase orders, 1992 – 2002



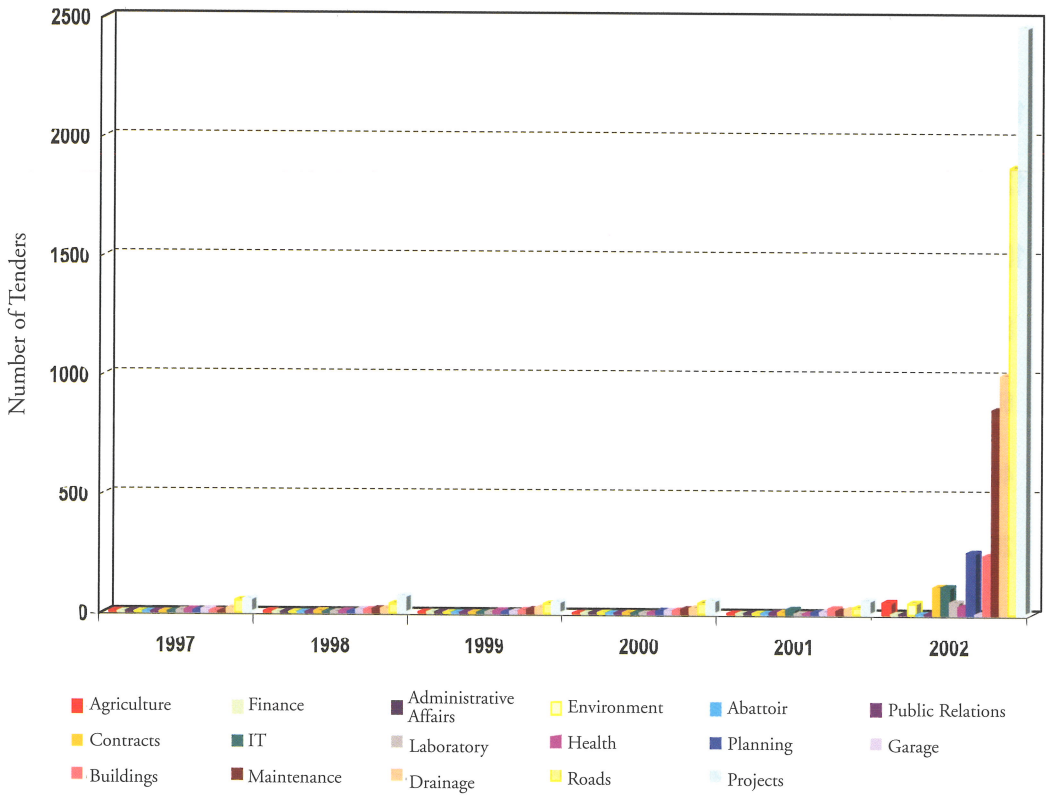
Value of purchase orders, 1992 – 2002



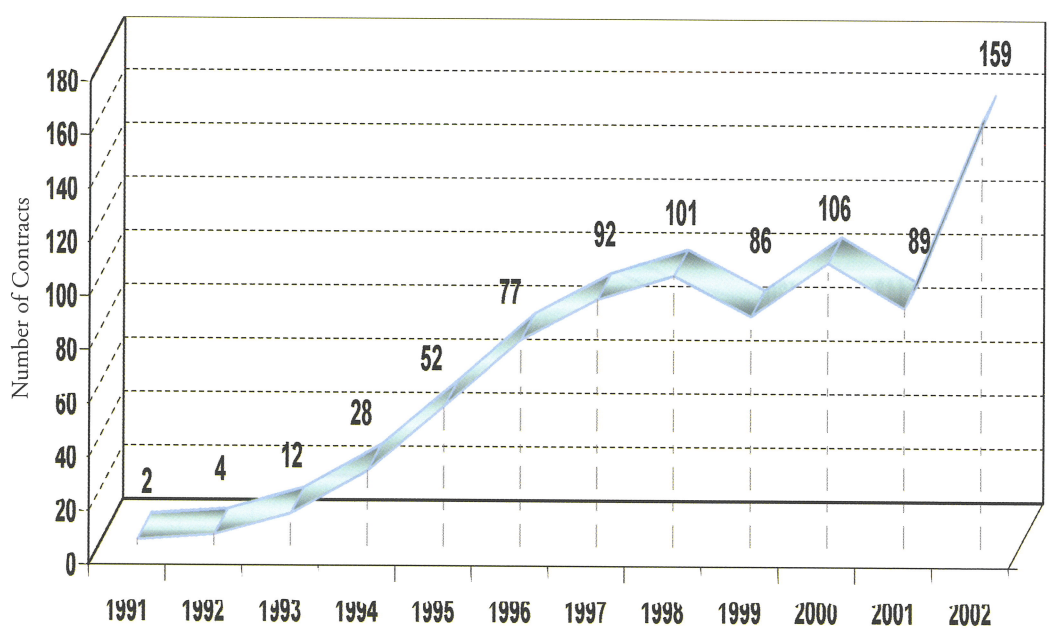
Number of tenders, 1991 – 2002



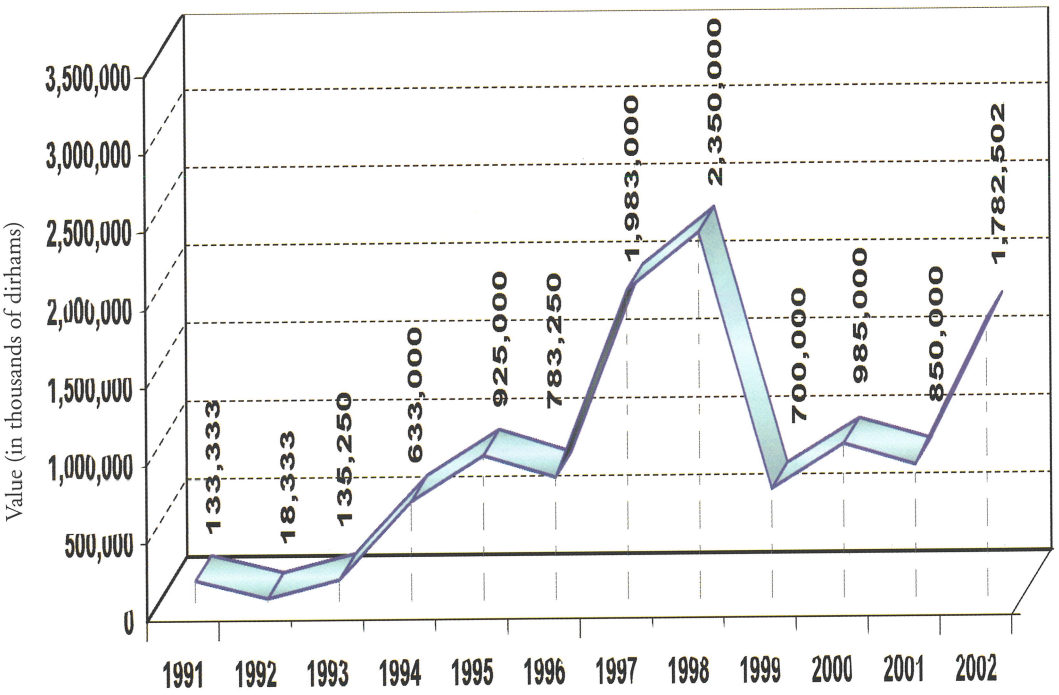
Number of tenders handled by the Department, 1987 – 2002



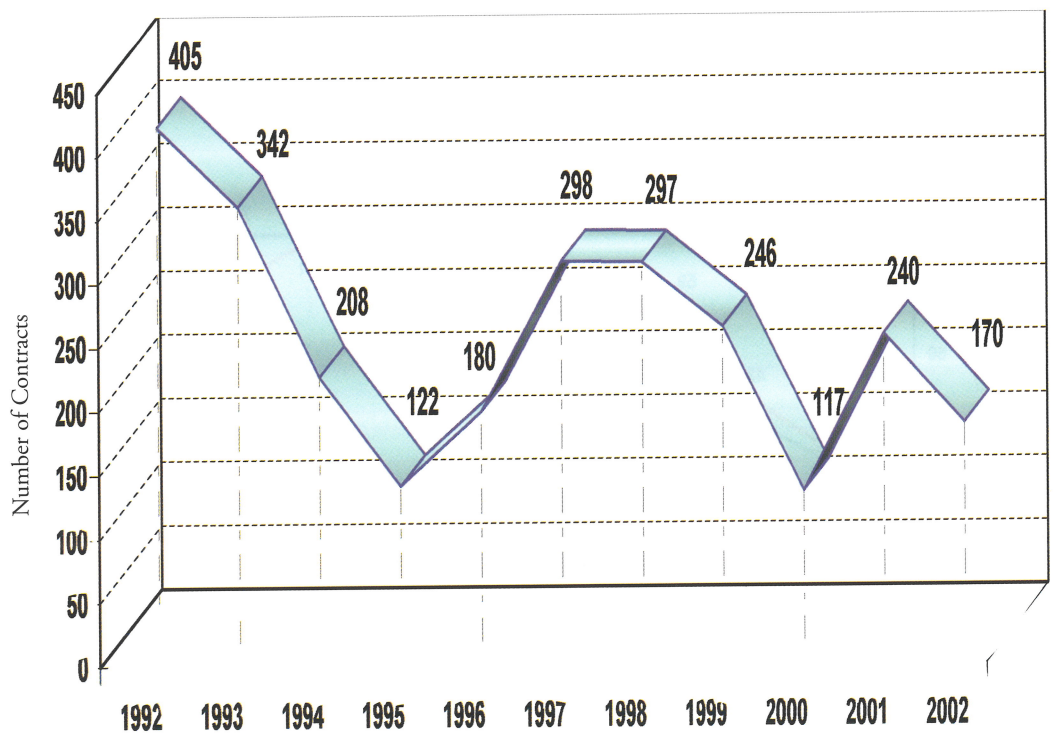
Number of contracts for construction projects, 1991 – 2002



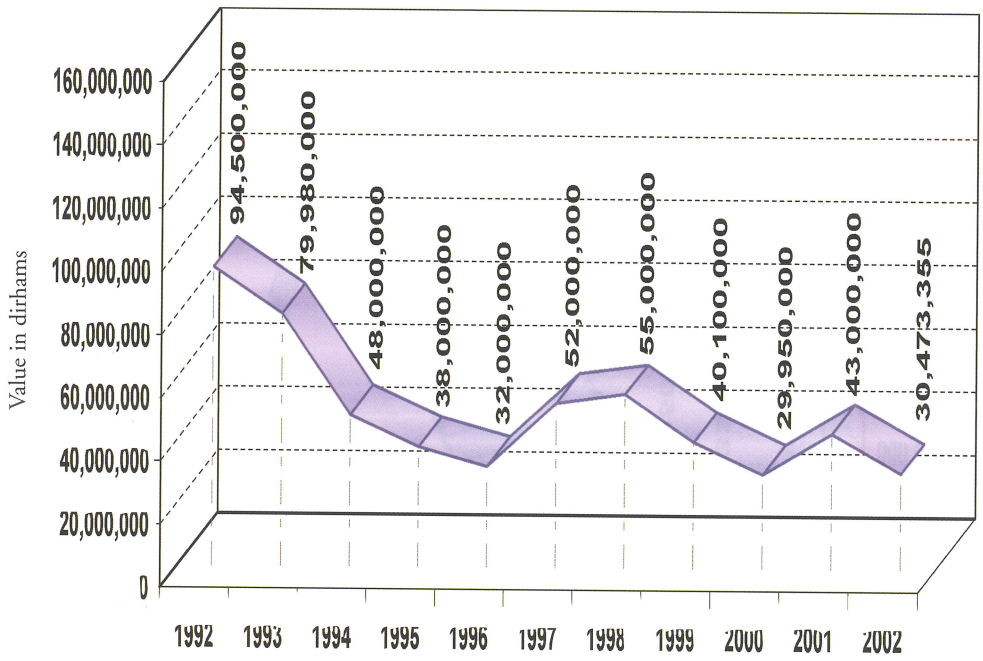
Value of construction projects, 1991 – 2002



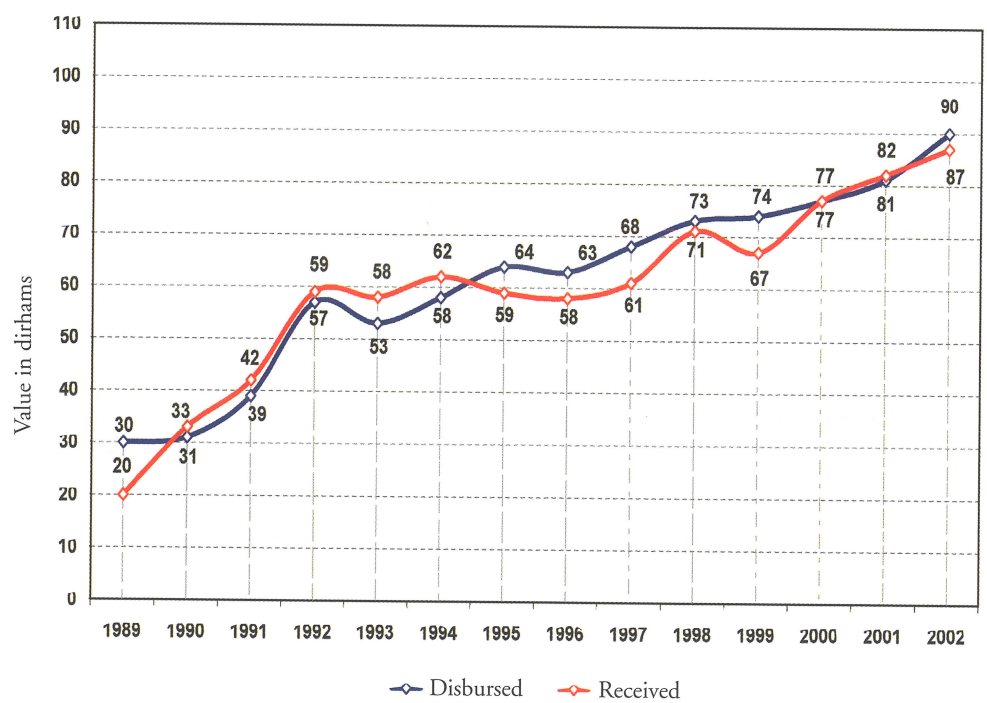
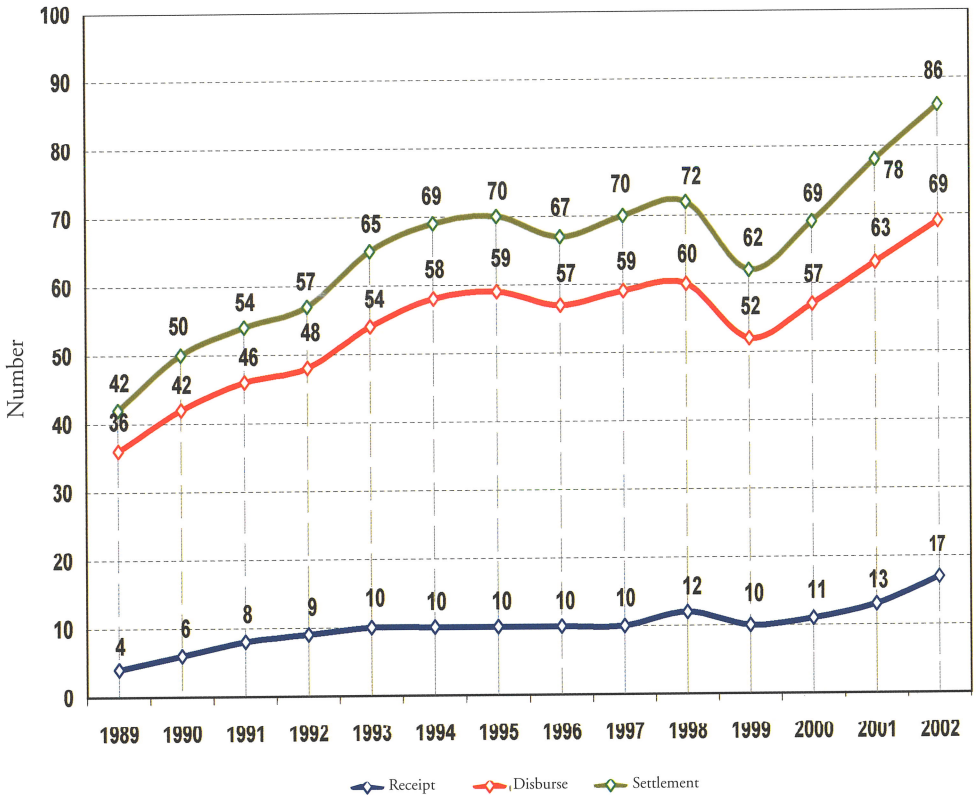
Number of Government housing contracts, 1992 – 2002



Value of Government housing contracts, 1992 – 2002



Value of received and disbursed items, 1989 – 2002



Stores movement, 1989 – 2002