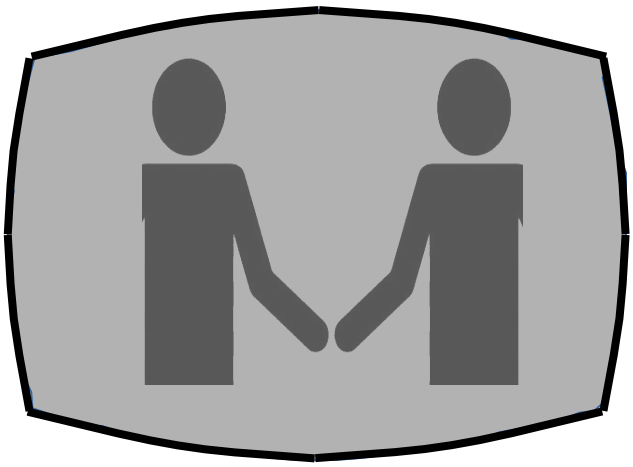
REPORT

To the Honorary Personnel Officer, LOLA

by Keith Callaghan

Personal Computing Group Leader



PERSONAL COMPUTING: THE FUTURE ROLE AND ORGANISATION AT LOLA

November 1982

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APPENDICES

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Alan Cooper, March 2021

Personal Computing: The future role and organisation of LOLA

Report to the Honorary Personnel Officer, by Keith Callaghan, Personal Computing Group Leader. November 1982.

1. Introduction

Although it is little more than two years since the PACTAL reorganisation, so much of importance has happened since then, both within and outside LOLA, that it now seems desirable to make a radical reassessment of the way LOLA is structured. This report makes some comments and suggestions as to how LOLA should change to meet the demands of Information Technology. The ideas are the personal views of the writer, and are based on what he sees as the basic business requirements for the cost—effective support of user-driven computing systems. The scope of this report is, on the whole, limited to those areas directly or indirectly concerned with personal computing. There may be organisational changes necessary in other parts of LOLA, but these are outside the scope of this report. It is acknowledged that internal and external political considerations may make some of the recommendations unworkable, but, again, such considerations are outside the scope of this report.

At present, all on—line personal computing facilities provided by LOLA are based on the programming language called APL. Two packages, ADRS and ADI, are referred to in this report. They are written in APL and supplied by IBM. An overview of these packages is given at Appendix F.

2. History of Personal Computing at LOLA

In the spring of 1980, Forward Planning took on the task of getting mainframe personal computing off the ground. To get the ball rolling, several large applications were developed by FPA staff. In some cases this took longer than anticipated, but perhaps was only to be expected, given that FPA's expertise in the APL-based systems had to be built up from zero. By the end of 1980, FPA started to disengage itself from APL, and took on two trainees for the purpose of devolving their responsibilities in this area.

In March 1981, I attended the first IBM Information Centre Managers' Forum meeting, and also the IBM course 'Information Centre Implementation'. Meanwhile, back at LOLA, FPA were discussing the possibility of transfer of APL support to a new group in the Applications Division. Fortunately, further discussions between Derek Schartau, Tony O'Brien and myself produced the decision to set up a Personal Computing Group, which, for the time being at least, would be independent of the then existing divisional structure. The group was headed by myself, with three other seconded staff. The group was set up in July 1981, but due to holidays, was not really operational until August. (Appendix A contains a list of the original functions of the group).

The plan was to have two secondments from Applications Division every six months, so that APL expertise could gradually build up in that division. Derek Schartau also obtained approval for two new permanent posts in PCG – a Principal Programmer post from January 1982 and an AP4-SO2 post from

April 1982. Inevitably, the first two seconded personnel were appointed to these two posts. Naturally enough, perhaps, the flow of secondments from Applications started to dry up, although a trainee systems analyst spent his first six months at LOLA with PCG, and one senior programmer, after a delay of many months, spent one month in PCG before his promotion took him back to Applications.

Appendix B shows the staffing level in PCG superimposed onto a graph of the usage of the APL service.

When PCG was set up, the plan was that by April 1982 the group would be staffed as follows:—

x P2D
x PlF
x SOl-PlC
x AP4-SO2
plus two secondments from Applications

This was indeed the staffing level for a few short weeks, in May, but when the second pair of secondments returned to Applications, there were no replacements until September, when a trainee programmer was appointed, with his first six months to be spent in PCG. Another such trainee was appointed in October, but has not yet started.

In July our AP4 programmer obtained a post with BUPA at £10,500 p.a. His post was filled in October by the trainee analyst who had already spent six months in PCG. In September, the Development Manager asked for volunteers for secondment to PCG from the Applications Groups. Although the response was very good, existing work commitments in Applications have prevented any secondments being put into effect.

A review of the work of PCG since its inception

In the sixteen months of PCG's existence, total CPU utilisation of Borough APL systems has grown by over 200%. At first sight, it looks like a success story, however, there are several points which have to be mentioned, which give, overall, a less optimistic picture.

(a) Much of the growth has been achieved only because of the enthusiasm and willingness of PCG staff in developing applications for end users. With the small number of PCG staff involved, I saw that the best strategy to achieve short-term growth was to get going as many new projects as possible. This necessarily meant doing much of the development work ourselves, leaving little or no time for some aspects of our more proper support role (eg training courses, manuals etc.)

    It has to be said, however, that many of the new systems are not just simple ADI or ADRS based end-user driven applications - they involve a great deal of work in the 'data management' area (mainly using PL/1 programs) and often use a mix of ADI/ADRS/APL.

    In short, they are not systems that even a fully trained and experienced user could reasonably be expected to develop on his own.

I have no doubt that there should be a continuing role for LOLA in the area of large (in terms of Personal Computing) application development. This role should be shared between existing Applications Group (who would be responsible for systems within their own application areas) and a group within PCG. If LOLA is not provided with the resources to perform this role, then it is quite feasible that Boroughs could set up their own development groups for the more straightforward projects. Indeed, this is what is already being attempted in more than one Borough and whilst 'centres of competence' in the Boroughs should be encouraged (ie groups experienced in the use of personal computing products who are willing, and have the time, to help others achieve their own goals using those same products), I feel that it is inappropriate for those same people to develop complex applications on behalf of others.

The trap that some competent personal computing 'end users' may be falling into is that they think that if they can develop a computerised application for themselves then it is just as easy to develop something for someone else. This may be so with straightforward 'packaged' solutions, using ADRS or ADI, but even then, the developer will have a continuing commitment to support the 'client' once the system goes live. The amount of time required for this role must not be underestimated.

Furthermore, it is a basic principle of Personal Computing that it is the user of the system who should have the responsibility of planning, developing and implementing his/her own computerised application. Given packages like ADI and ADRS, it is quite feasible for many Borough staff to implement their own straightforward applications. The principal aims of LOLA's Personal Computing Group are to make Borough staff aware of the capabilities of the products, train them in their use, and support them in their implementation.

In the case of the more complex applications, involving a mix of PL/1, APL, ADRS, ADI etc. then these are outside the (present) capabilities of Borough staff. Clearly the development of complex personal computing applications should be left in the hands of the Borough's own DP organisation - LOLA. (It is not inappropriate to mention here that PCG's four 'permanent' staff have nearly 50 years computing experience between them).

(b) Since July 1981, use of the APL batch facility has grown from zero to become nearly 60% of the total APL CPU utilisation ie on-line usage of APL systems is now only about the same as a year ago. Fortunately we can say that we have about 35% more on—line users billed per month, so the overall picture is that of more on-line users, but with the bigger, more static systems now running mainly in batch, with interactive facilities for development and ad hoc analysis.

(c) Appendix C is a list of the work carried out by PCG since August 1981. This list exemplifies the successful side of the group, but against these successes must be put a list of objectives which we had set ourselves, but which we have so far failed to achieve.

3. The current state of PCG

The end of August this year saw PCG at its lowest staffing level since its inception: there were just three people, but one of these was involved for about half his time with SPSS and SASPAC, leaving just two and a half staff for the support of four Boroughs' mainframe personal computing needs.

Since then, the situation has improved somewhat, with one permanent addition and one trainee (on six months secondment from Applications Division), but we are currently at a most crucial stage in the evolution of our personal computing service, in that we are soon to be providing completely new, screen-based, systems on VDU terminals of the existing IMS network. (Currently all APL terminals use slow and unreliable 'dial-up' telephone lines to communicate with the LOLA mainframe).

Such is the lack of resource in PCG that we have had little opportunity to publicise these new facilities, although with our present restricted computer capacity, that is probably not a bad thing.

4. Inhibitors to future growth of personal computing

(a) Lack of machine power

This has been addressed by the 'Replacement Strategy'. Growth estimates suggest that end user computing will demand more resource than IMS—based systems within five years. One Borough is disputing these estimates by suggesting that micros can replace mainframe personal computing systems.

Machine power is necessary not only to provide an adequate service for end users, but to increase the productivity of the Applications Division - see (b).

In the short term (up to a year or more ahead), perhaps machine resource is not a problem. It has already been stated that on-line APL use is not increasing, due to the increasing use of batch APL, and although the introduction of screen-based systems will (given enough impetus by LOLA) greatly stimulate demand, an early split of APL and IMS to separate machines will enable some growth before lack of machine resource becomes critical.

(b) Lack of manpower

I believe that a major expansion of staffing levels in the micro and mainframe personal computing areas must be considered an urgent necessity if LOLA is to properly support the inevitable growth in 'end-user' computing.

Perhaps in the longer term availability of manpower is not so much of a problem, for the following reasons:-

(i) A large machine must imply two-shift working, freeing manpower from Operations.

(ii) A large machine, and other hardware and software support for Applications Development should result in major productivity

gains. Hardware support includes provision of one terminal for every two programmers, and software support includes real-time TSO facilities for program development, and provision of application generator and report generator software. Productivity gains in the Applications Division could enable a transfer of staff from that Division to the new technology support areas.

(iii) The resource required for Payroll should run down soon, although it may be compensated for by the need for increased manpower working on Housing.

(iv) The support staff : end user ratio in the early stages of 'Information Centre'* development should be 1:10. This could increase to 1:50 in a more mature state of evolution ie as end users acquire enough knowledge to support other end users.

* IBM's term for a group performing the role of our PCG.

(See Appendix F for summary of objectives and benefits of the Information Centre.)

It should be noted that the installation of all this sophisticated end-user biased software implies an inevitable need for increased manpower in the Technical Services area.

The overall trend, as I see it, is for fewer staff in Applications and Operations, and more staff in Technical Services and Personal Computing, but the short-term needs of PC support cannot be addressed by an incremental build up of staff, perhaps by transferring posts from other sections - adequate staffing levels are required <u>now</u>, and I can see no way to satisfy this need except by the addition of new posts to LOLA's establishment.

(c) <u>Vested interests in the Boroughs</u>

In the IBM concept of mainframe personal computing there are just two parties involved: the End User and the Information Centre. The end user justifies his application to his manager, and pays the Information Centre (or the DP organisation it represents) for the computer resource.

This concept seems straightforward enough, but in more than one of the LOLA Boroughs the computer development staff appear to be taking on some responsibilities which I believe should rest with LOLA, as the Boroughs' DP organisation. The traditional central co-ordinating role of Borough computer development sections is, in my view, not appropriate to Personal Computing activities. Where this role has been enforced it seems to apply an unnecessary level of bureaucracy or, worse, a replacement of the service provided by PCG by an inferior service, or no service at all.

<u>It is vitally necessary to clarify the roles of LOLA staff vis a vis Borough computer development staff in the personal computing area.</u>

(d) Lack of penetration

LOLA has not yet been successful in achieving a widespread and influential base of mainframe personal computing users. This is due, in part at least, to the following:—

(1) See (c) above.

(ii) Lack of resource in PCG to carry out its marketing and consultancy roles to any effective degree.

I believe that LOLA should establish direct communications at senior level within each Directorate in order to promote the awareness of the potential of end—user computing facilities, which is so sadly lacking in all but a few areas at present.

5. THE ORGANISATIONAL IMPLICATIONS

The purpose of any re-organisation of the LOLA structure must be to provide the best service to its users.

This section suggests three alternative organisational structures which may be seen to cater for the need to support the new technology areas. The method used to produce these structures is as follows:-

1 : List the tasks that have to be allocated.

2 : Allocate the tasks listed in 1, giving reasons.

3 : Define a management structure for the groups concerned.

The current groups that are affected by all three organisational proposals are Applications, Forward Planning and Personal Computing Group.

Section 1: TASKS TO BE ALLOCATED WITHIN A REVISED ORGANISATIONAL STRUCTURE

1. **End user support for APL-based systems:**

   a) **LOLA Users**

   b) **Borough Users**

2. **End user support for other mainframe Personal Computing Systems:**

   a) **LOLA Users**

   b) **Borough Users**

3. **Micro Computer-based Persona] Computing Support:**

   a) **LOLA Users**

   b) **Borough Users**

4. **'Quick Job' application development, using any programmer productivity tool that is or may become available. (APL, PL/I, DBASE, RAMIS, etc).**

   a) **Mainframe systems**

   b) **Micro systems**

5. **Decide on the best approach to satisfying a user's needs (eg Micro PC, Mainframe PC, 'Quick Job', 'Conventional' application development).**

6. **Investigate new products and Systems (R & D)**
   eg query languages
   Report generators
   Application generators
   Multi-function workstations
   Micro Software
   Micro/mainframe Communications.

SECTION 2: **ALLOCATION OF TASKS LISTED IN SECTION 1**

1 (a) & (b) : The current role of PCG.

2 (a) & (b) : An obvious expansion of PCG's existing role.

3 (a) & (b) : EITHER a support role for PCG OR for a micro support group. I strongly support the former proposal for the following reasons.

a) It is desirable to have one point of contact with LOLA for end users. The convergence of systems, and the emergence of the viable multi-function workstation will mean that a user may be using an integrated mix of both micro—based and mainframe systems (without perhaps even knowing it).

b) It is the better structure to deal with the control of the balance of support between micro and mainframe systems.

c) It provides for specialisation of staff, but not at too high a level. Having 2 small separate groups for Personal Computing support could lead to problems such as those recently experienced by PCG when staff are transferred, or leave.

d) To my knowledge, there is no organisation which belongs to the IBM Information Centre Managers Forum which_does not support micro based systems from their Information Centre (our P.C.G).

4. (a) & (b) **These tasks to be Shared between Applications Groups and PEG.**

Applications Group should carry out this task under the following circumstances:

a) The job was planned within the overall original design of the system.

or b) The job is to be an integral part of an existing suite of programs ie it accepts input from an application program.

or c) The job is large (say taking more than 8 man/weeks), providing a major enhancement to an existing application.

and d) Applications Group see the job as an integral part of their application and are prepared not only to develop_but to maintain it.

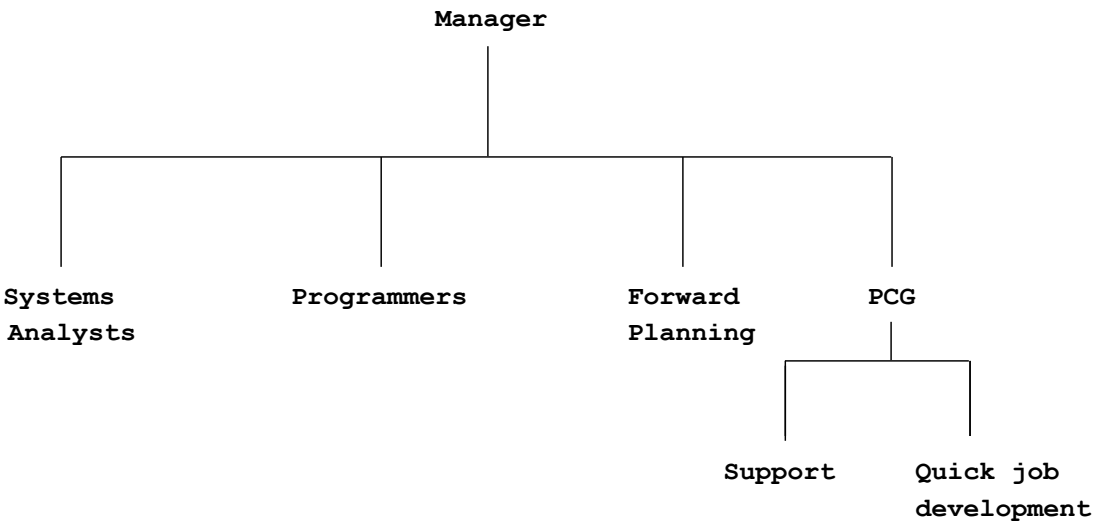
I have no intention of implying that there should be hard and fast rules, but would say that a job which merely accessed data from an existing application is not to be regarded as having to be developed by the relevant application group. Data is a corporate asset, not to be jealously guarded by any particular Applications Group.

5 : **Forward Planning (Business Analysts).**

6 : **Forward Planning (Business & Technical Analysts) with occasional contributions from Applications Groups and PCG**

SECTION 3: ORGANISATION STRUCTURES

(a) Development Division



This is the 'minimum change' option.

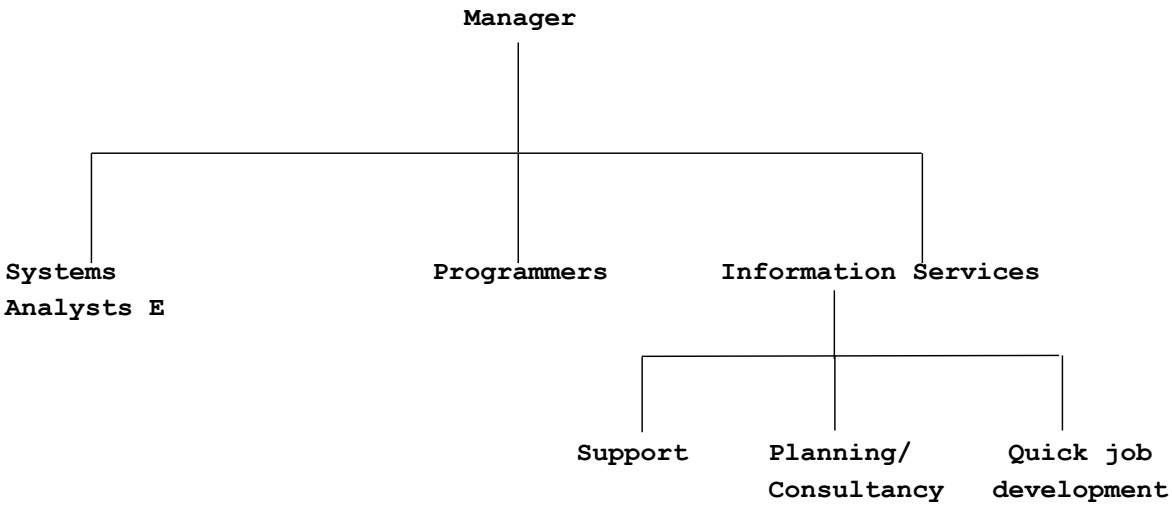
PCG's role prior to 6/82 is expanded to encompass micro-based systems. This could not be done until such time as the technical analysts have devolved their current day-to-day operational tasks to more junior staff in PCG.

Additionally, PCG's staff are split into two groups - one for support of end users and one for small application development. There should be constant rotation of staff between these two groups.

In my view, this option does little to address LOLA's changing role, although it could work if a sufficient number of people were allocated to PCG. It really seems to be change for the sake of change, although it does include the important step of unifying all personal computing support. It further increases the current problems related to the reporting structure of the division.

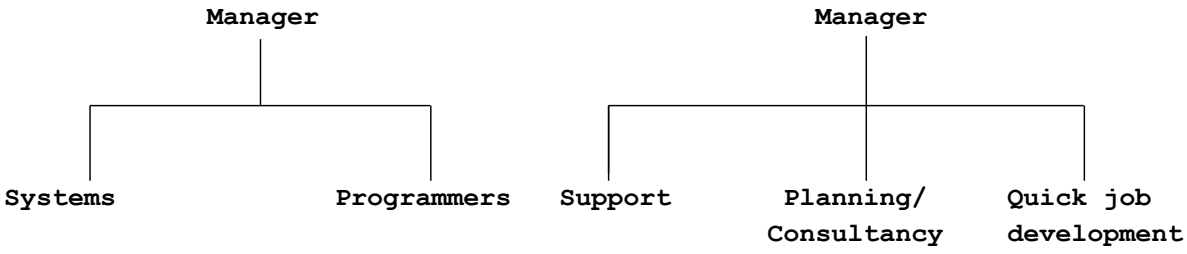
An alternative 'minimum change option' is to simply broaden PCG's responsibilities to include micro support while retaining the present reporting structure of PCG.

(b) Development Division



A more adequate approach to LOLA's new role than (a). PCG (renamed 'Information Services') significantly reinforced by the inclusion of Forward Planning staff, whose current roles, experience and abilities fit in very appropriately with the need to take a strong marketing approach to promote awareness of LOLA's new Information Services.

(c) Development Division Information Services Division



Essentially the same structure as (b), with one important and obvious difference. Creating Information Services as a separate division emphasises LOLA's commitment to the changes brought about by new technology developments in data processing.

This structure could be arrived at by evolution from (b), or indeed by evolution from the present PCG/Director relationship. It is similar to that already in place, for example, at the City of Coventry.

The above structure corresponds to the recommendations of IBM - the organisation which thought up the idea of the Information Centre as a means of supporting user-driven computing. The following is taken from the IBM publication 'Implementation Guide for an Information Centre', a copy of which I can provide on request.

"In IBM's experience, it is best for the IC manager to report to the Data Processing Manager, either directly or indirectly, as part of a user services group comprising, for example, Information Centre, Development Centre, Office Systems Support, and Data Management.

To avoid conflicting objectives, it is advisable not to have the IC manager reporting to either the Operations manager or the Application Development manager".

Appendix F shows IBM's summary of the objectives and benefits of an Information Centre.

Conclusion

I believe that there are two issues which are even more important than the correct choice of overall organisation structure.

1. **The staffing levels needed to support adequately the new technology areas.**

2. **The necessity to integrate micro and mainframe personal personal computing support.**

To date it has been almost impossible to obtain staff from Applications Division on secondment. The biggest boost that 'Information Services' could get from within LOLA is by the addition of Forward Planning staff - it also meets the needs of (2) above.

Hopefully, budgetary provision will be made in 1983/4 for extra posts in the new technology support areas.

It is vital to build up a nucleus of skilled staff with a depth of experience behind them. While secondments are helpful to PCG and ultimately, Applications, they do not serve to build up this nucleus.

6. Summary of recommendations

1. **An immediate increase in staff allocated to micro and mainframe personal computing. Ideally this should be by the creation of new posts, or the permanent transfer of existing posts. Secondments from inside and/or outside LOLA are the other options.**

2. **Use 'Development Centre' philosophies to increase productivity in Applications and thus free manpower resource for transfer or secondment to 'Information Services'.**

3. **Devolve operational support for micro systems to more junior staff, and at the same time unify support for micros and mainframe personal computing.**

4. **Make provision for a 'small application development service' within Information Services.**

5. **Mainframe personal computing services should be charged directly to users. (Although this happens in theory at present, this is not so in practice).**

6. **A clarification of the relative roles of LOLA's staff and Borough Computer Development staff is needed.**

Draft List of Functions to be carried out by LOLA's Persona1 Computing Group (P.C.G.) (Dated Ju1y 1981)

CONSULTANCY

For end-users

- Provide assistance in justifying usage of P.C. faci1ities
- Advise on genera1 approach to app1ication deve1opment
- Provide advice on se1ection of the best P.C. product for a given task
- Provide system design assistance
- Promote use of P.C.G. Services

Internally

- Advise App1ications Division on the use of P.C. faci1ities for system deve1opment and as an a1ternative to PL/1

EDUCATION

- **Identify user education requirements for each product**
- **Develop, teach and maintain courses for each of the P.C. products supported by LOLA**
- **Advise users on individual education requirements**
- **Provide education service for in—house P.C. users**

ADVICE

- **assist users in problem determination & resolution**
- **provide advice on coding and product usage techniques**
- **advise users on information retrieval techniques and procedures**

DATA MANAGEMENT

- **Collaborate with Technical Services staff in establishing file backup and recovery procedures**
- **advise users on methods of accessing operational data**
- **Provide systems for retrieving and collating data from any of LOLA's databases/files**
- **Provide copies/extracts of operational data as required by users**

ADMINISTRATION

- **Record new user registrations and ensure that Technical Services set up USERID's/PASSWORDS. Inform user when available.**
- **Maintain details of APL-based systems written by LOLA and Users.**
- **Co—ordinate P.C. education (internal & external users)**
- **Co-ordinate P.C. bulletins, user guides and other information media**
- **Administer data management procedures**
  - **process data extract requests**
  - **monitor disk usage**
- **Monitor user satisfaction**
- **Maintain a directory of users**

TECHNICAL SUPPORT

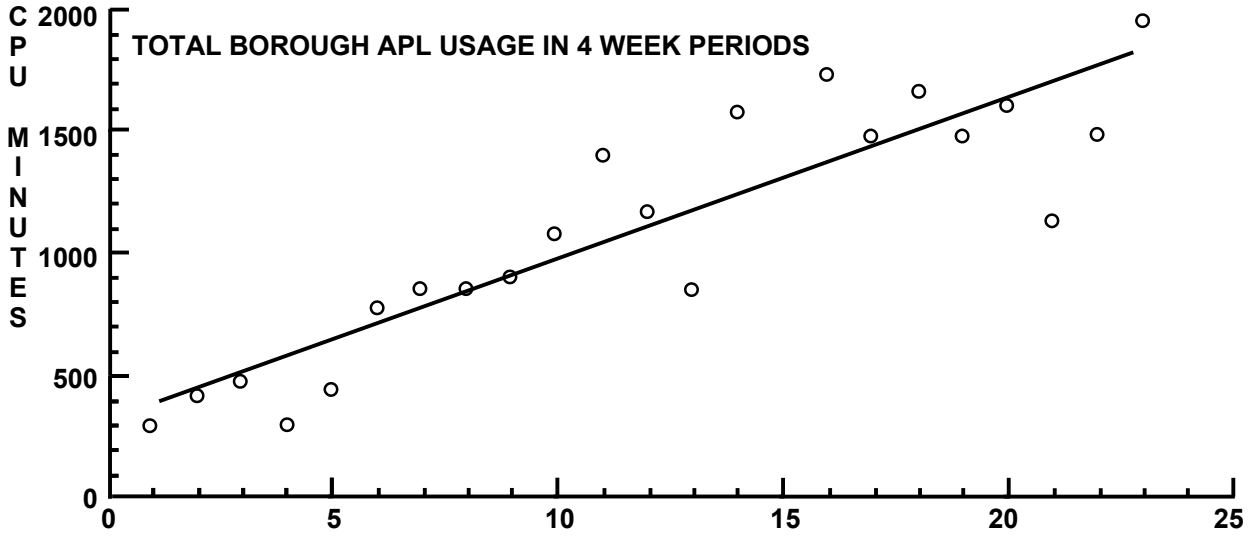
- **Establish accounting procedures, in collaboration with Technical Services**
- **Formulate P.C. Hardware/Software plans, in collaboration with Technical Services**
- **Co—ordinate user hardware and software requirements**
- **Establish a technical strategy for P.C., in collaboration with Technical Services**
- **provide technical support for P.C. staff**
- **evaluate and test new products**
- **assist Technical Services in product installation**
- **provide user-friendly interface with P.C. products**
  (if resource is available in Technical Services, some or all of this may be done by them)

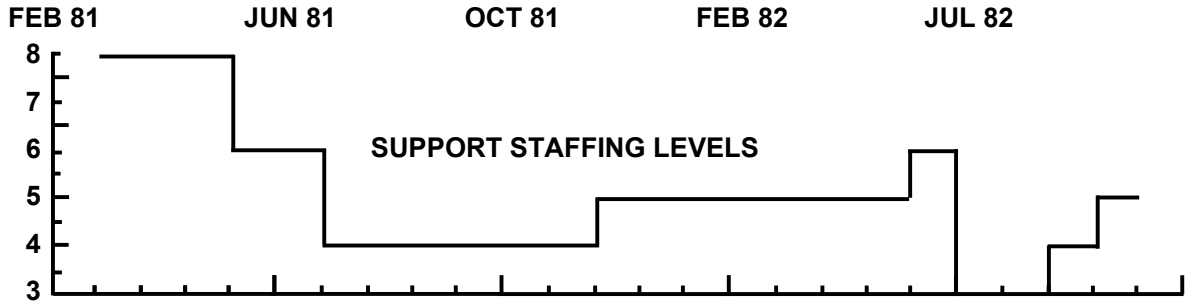
GENERAL

- **Provide Personal Computing User handbook, Application Guides and Facilities Guides.**

APPLICATION DEVELOPMENT

- **Design, write and install end-user systems on request.**


TOTAL BOROUGH APL USAGE IN 4 WEEK PERIODS
CPU MINUTES
2000
1500
1000
500
0
0
5
10
15
20
25


FEB 81
JUN 81
OCT 81
FEB 82
JUL 82
SUPPORT STAFFING LEVELS
8
7
6
5
4
3

PERSONAL COMPUTING APPLICATIONS

HACKNEY

Street Lamps:	APL based system - to produce movements of street lamps (eg withdrawn, unlit, relit) to be used in calculating electricity board charges.
Manpower Budgetting:	Extracts of Payroll & FMA to produce management reports of personnel costs. Uses ADRS, ADI & APL. Soon to include personnel data from GPA.
Open Spaces:	System to hold details of work tasks on Hackney estates, costs of tasks and a modelling system to assess cost of changes to current work schedules. ADRS system set up by B. Langham, with some APL functions written by PCG.
Consultees to Boro Plan	ADRS System containing details of consultees in Borough plan, with APL facility to print gum labelled addresses of interested parties as and when appropriate.
GPA/Payroll	Merging of payroll and GPA for personnel to produce ADI files for Directorates. See also Manpower Budgetting.
DLO- Batch Submissions	Enhancement to DLO (see General) to allow batch submission from terminal to do FMA charge file generation (APL)
GLC Transfer	Though APL code was written by Hackney, assistance was given especially in providing ADI files from GLC tapes.

	This was often quite complicated involving Assembler written routines to convert the data before the inversion program could process it.
Control of expenditure related to placements in residential accommodation (Social Services)	APL system for maintaining details of number and cost of placements per home, with facilities to project costs to end of year.

HILLINGDON

Energy Conservation:	Takes monthly readings of all meters in school premises and handed to ADRS. APL written functions to provide tariff checking facilities, detailed totals and cumulative, grand totals, comparison reports and comparison graphics. About to be expanded for social services and other education buildings.
Capital:	Monthly, or more frequent, extracts from FMA and Re-analysis file using combination of ADI, ADRS and APL to produce up to 16 different financial reports and generate input for FMA as required.
Establishment:	Monthly extracts of Payroll and CORPSE merging with Seecheck tape of vacancy data to create ADI file. Reports produced both from ADI and ADRS. Some specially written APL functions also involved.
L DLO Report:	(Separate from DLO system) - extracts from FMA, to create ADI file and then specially written APL functions to produce DLO reports.
Chain Link 58:	Extracts from Cost Centre database/ Re-analysis file to produce reports giving details of income and expenditure for Chain Link 58 codes including subtotals for each managers account no., descriptors of cost codes, and comparison of actual with estimates.
Manpower Watch:	ADI analysis of Payroll file, produced quarterly and run in batch

HILLINGDON (Cont)

PEAS:	Extract from FMA written to APL workspace to produce PEAS reports on selected cost codes at user's terminal request.
Stores:	Extract from stores merged with manually prepared survey data (West Drayton stores).

DBDC

Time Sheet System:	Processes employees time sheets and calculates costs for each cost code and then calculates percentage oncost for each section and applies it to cost centres. Bulk of data input on Seecheck and written to VSAM files. Interactive facilities available for user to amend data. Reports produced at each update, and ADI file produced for further ad—hoc analysis.

Social Services

Manual Workers:	Extracts of FMA and Payroll merged and written to APL workspace to provide details and totals of employees costs for each cost centre. Requested by Duncan Worster but never operationally implemented.
DLO batch input:	Enhancement to DLO system (see under general) to allow Seecheck input of data as well as via terminal.
Payroll Estimates	ADRS-based system showing all vacant and filled posts (with increments applied where appropriate), analysed by costcode.
Garage Rents:	Production of data submission forms for the increases in garage rents

HARINGEY

Payroll Comparison:	**Comparison of previous payroll extract with current extract giving reports of changes relevant to the Superannuation Section. (monthly)**
GLC Housing Transfer:	**Functions written to transfer data on rents system to new references for both GLC and White Hart Lane reorganisations. Including creating files to re-input to rents and PIPs system (APL/ADI)**
Stores:	**Set up APL functions to produce various ADI reports in batch — run quarterly (APL/ADI)**
Payroll/GPA Comparison:	**Extracts from Payroll & GPA compared to produce data submission forms to set national insurance no. on GPA so allowing merge of two applications in creating ADI file. (APL/ADI)**
Consumer Complaints:	**Ongoing - replaces previous card system. (APL/ADI)**
Architects Salary Spend:	**Ongoing - processing Architects time sheets, producing analyses, reports and forms for input to FMA. (ADI + APL)**
Telephone Rental System:	**ADRS system for social services concerned with telephones in c1ients homes paid for by borough. (ADRS/APL)**
Rehabilitation:	**Extract of FMA loaded into ADRS system. (ADRS)**

HARINGEY (Cont.)

Auditors Timesheet:	**Though mainly developed in ADRS by Steve jewell - various APL functions have been written at LOLA to he1p in data manipulation between 2 workspaces. (ADRS/APL)**
Press List:	**Production of 1ist of planning applications to go into weekly press. (ADI/APL)**

TOWER HAMLETS

Social Services - Survey Stats:	Production of Analysis of Social Services Surveys. (ADI)
Housing Stock Takeon:	Use of PIPs takeon data (never implemented on PIPs) to create ADI file of housing stock.
PIPs 11:	Extract of PIPs function 11 loaded into ADRS workspace. (APL/ADRS)
PIPS 12:	Extract of PIPs function 12 loaded into ADRS workspace. (APL/ADRS)
Employment Census:	Inversion of Government Supplied employment census tape. (ADI)
Highway Sewers Building Works:	Extract of FMA and inversion. (ADI)
Rechargable Work Deposits:	Take—on of back records into ADRS completed. To be expanded to take extracts from the Jobs Database. (ADRS)
GPA/Payroll takeon:	To do: — Use payroll data to help implement GPA personnel function waiting on boro/Group C to contact us with details. (APL)
Part-time Manual Workers pay recalculation:	Uses ADI (working on data extracted from Payroll) to recalculate part-time manual workers basic pay & plus rates, resulting from reduction in standard working week

TOWER HAMLETS (Cont)

HIPS (CAPITAL)	Loading of FMA extract to ADRS workspace
Population Survey	Production of ADI file of data from Tower Hamlets own population survey and generation of reports.
Social Services case records statistics	Loading of data into ADRS workspaces for production of statistics/reports for DHSS etc.
Rates/Rents R.V. Match	Extracts of rating information for council properties was taken from both the Rates database and PIPS function X, then merged by assessment reference onto 1 file. ADI was used to report where the RV's and or GV's from both sources did not match.
Unified Housing Benefits	Production of a list of residual charges owed to the council.

OTHER PCG APPLICATIONS

DLO:	APL written system which accounts for work performed by DLO's and produces results for updating the cost centre level of FM for both client expenditure codes and DLO revenue account income heads. (Operational in 3 boroughs)
Part-time Manual Workers - Pay Recalculation	ADI/APL based system, recalculating part-timers' grade rate and plus rates due to reduction of working week from 40 hours to 39 hours.
CLASS Superannuation Records	Production of Indices by Name and National Insurance No., and lists of recent updates.
General Office:	Internal to LOLA — ADRS system for producing finance and admin reports.
SPSS etc.	Expanded list available on request includes: 18 regular jobs (run weekly/monthly) 5 jobs under development, approx. 20 adhoc analyses. Census. Testing and Familiarization of SASPAC.

NB: Not included in this list are ADI inversions which did not require specially written APL - see list of current ADI files for this information. (Following)

HACKNEY **ADI Files**

AOAAAPL	-	GLCACY	GLC transfer - cycle A
		GLCADI	Original GLC data —
		GLCAUG	GLC - Post Transfer Payments - August
		GLCBCY	GLC transfer - cycle B
		GLCLET del.	
		GLCPAY	GLC Post Transfer Payments
		GLCREB	GLC Rebates
		GLHEAD	GLC Street headers
		GSTORE	GLC Stores
		HSTORE	Leo Stores
		H9909	Rents
		LEOHED	Leo - Street Headers
		PIPS11	Pips Function 11
		PIPS18	Pips Function 18
		PIPS33	Pips Function 33
AOCLAPL	-	CLUS45	Old 'CLUSTER' extract
		REVIEW	Latest 'CLUSTER'
		PIP128	Pips Function 128
AOOMAPL	-	KK1001	GPA - Personnel
		KMBC57	Weekly FMA Inversion
		KMBC82	FMA Inversion @ e.o.y.
		KMBP57	Weekly Payroll Inversion
		KMBP82	Payroll - @ e.o.y
AOAAAPL		RVS	Rates/Rents Inversion
AOMLAPL		FORMI3	Social Services
AOMLAPL		FORM22	" "
AOMLAPL		FORM	" "

HILLINGDON **ADI Files**

BODWAPL	-	F100	Pips Function 100
		LMPAY	Monthly Payroll
BOIMAPL			West Drayton Stores
BOIMAPL			West Drayton Leo
BOJPAPL			Extracts of FMA for CAPITAL & REVENUE systems
		LFMAX	
		LREV	
BOLHAPL	-	BISON	BISON - houses
BOLHAPL	-	LSALE2	Council house sales
		PIP100	Pips func 100
		PIP105	Pips func 105
BOPEAPL	-	LMPAY	Monthly Payroll - current
		LMPAYX	" " - previous
BOPRAPL	-		Rates/Rents Comparison
		LOLA	FMA — To produce DLO reports
		LETS	School premises - lettings
		LPEAS	FMA extract — for PEAS reports
		LRATES	Rates Inversion
			Stores
			Transport File
BODMAPL		AUDRV	Rates (Audit)
BODMAPL		LEHOD	Environmental Health Officer Diaries
BOLHAPL		SALES1	Council House Sales
BOLHAPL		WAIT1	Waiting Lists
BOLHAPL		WAIT2	" "
BPOEAPL		LMLAST	EOY Payroll
BOPRAPL		LMAN	Part-time Manual Workers
BUTSAPL		SHEETS	- DBDC — Time Sheets

HARINGEY **ADI Files**

COBJAPL	PRESS2	Press List - from PIPs planning
COBNAPL	RSTOR1	Quarterly Stores Extract
COCWAPL	RK28	GPA Personnel - Current
COCWAPL	RK28X	Previous
CODCAPL	CHRMA	FMA — Housing
COGCAPL	GLCACY	GLC Transfer - Cycle A
COGCAPL	GLCBCY	GLC Transfer - Cycle B
COGCAPL	GLCREF	GLC References - Original
COPYAPL	RMDIRS	Payro11 Extract for Directorates
COPYAPL	RMEOY	Payroll Extract — @ E O Y
COPYAPL	RMPAY	" " — Monthly updated
COSJAPL	PIP100	PIPs 100
COPYAPL	RMAN	Part—time Manual Workers
COPYAPL	RMLAST	Haringey Payroll - Last year
COSJAPL	0T2426	Corpse weeks 24 to 26
COSJAP	PIPS18	PIPs - function 18

TOWER HAMLETS		ADI Files	
DOAGAPL	-	TPOP	
DOAWAPL	-	STATS2	Children in Care Stats
DOAWAPL	-	TSSCIC	
DOCPAPL	-	TPAY1	T Payroll - monthly
DOEPAPL	-	JOBSOY	Jobs database - 01d year
DOEPAPL	-	TFMA01	FMA extract (sample)
DONMAPL	-	EMPDAT	Employment Census
DONMAPL	-	HSEDEC	Housing Stock
DONMAPL	-	PIPS12	PIPs Function 12
DOXXAPL	-	STATS1	Social Services - statistics
		TBPS80	
		TBPS82	
		TCH77	
		TCH78	
		TCH79	
		TCH80	
		TCH81	
		TCH82	
		TMH80	
		TMH81	
		TMH82	
DOEPAPL	-	CCOY	FMA (01d year)
DOEPAPL	-	CC26	Cost Code - Weeks 26
DOEPAPL	-	JOBS26	Jobs database - week 26
DOEPAPL	-	TJHIST	Jobs History File extract
DOEPAPL	-	TPAY	Part-time manual workers

PERSONAL COMPUTING GROUP

WORK OUTSTANDING AT 26.8.82

PART 1: GENERAL

1. SOFTWARE

Assist with installation of APL rel.4/GDDM.
Checkout and familiarise with new facilities :
GRAPHPAK
APE
Full Screen Design/Editing
Session Manager
VSAM file utilities
ADRS2 rel 1.5 (currently have 1.3)

(The above systems will be made available initially to in—house terminals only.)

2. CHANGES TO OPERATIONAL SYSTEMS BEFORE THEY CAN RUN UNDER APL rel 4.

3. PREPARE TRAINING COURSES/MATERIAL FOR END USERS.

4. AUDITORS REQUIREMENTS

5. PUBLISH 4TH EDITION OF PERSONAL COMPUTING MAG.

6. GIS REPLACEMENT.

7. TRAINING OF LOLA TRAINEES & BOROUGH SECONDMENTS

8. SASPAC IMPLEMENTATION

9. PRODUCE OPERATING INSTRUCTIONS & HAND OVER OPERATIONAL SYSTEMS TO JOB CONTROL.

The above tasks are over and above the day to day support role.

PART 2: BOROUGH SYSTEMS

HACKNEY

1. **Street Furniture**

   ADI training
   User guide

2. **Manpower Budgeting**

   Complete revised User Manual
   Link GPA and Payroll extracts

3. **Open Spaces**

   Write APL functions
   Modelling System
   Fu11 Screen user interface

HILLINGDON

1. **DBDC Timesheet System**

   User guide
   ADI reports + training
   Enhancements to basic system

2. **Energy Conservation**

   Graphics functions

HARINGEY

Architects Salary Spend

Existing system to be extended

Loan Records

(Liaise with Marion Newe11)
Help with setting up of an ADRS—based system for recording of loans and calculation of repayments.

Housing Reorganisation

APL functions to facilitate above

Rates/Rents Rateable Value Match

TOWER HAMLETS

Capital (HIPS)

Revised Z70LOADFILE

Case Records Statistics

Take-on task (back records)

GPA Personnel Take-on

Liaise with Andy Albone

Rechargeable Works

FMA extract to be loaded into a summary of existing ADRS2 ws.

PIPS function 11

ADI extract

Chief Executives Management Information System

Initial study of requirements

ADRS

ADRS stands for A Departmental Reporting System and is a generalised IBM supplied APL package providing an easy-to-use environment for entering, storing and processing information and for producing printed reports. Communication with ADRS is via an APL terminal. ADRS could be described as a 'user-friendly' system - prompting is provided at all stages of the conversation.

ADRS holds information in a 'rows and columns' structure and the user must initially describe the characteristics of his data (numeric or alpha, etc.) to the system. Future changes to the structure of the ADRS 'data-base' may be made easily.

Once the data—base has been defined, the user may begin to enter his data and ADRS provides several simple methods for this purpose. Alternatively, data may be transferred to an ADRS data-base from other computer files or APL workspaces.

ADRS offers several facilities for the manipulation of data. Information may be sorted and simple calculations may also be performed. More complex calculations and manipulations of data may be carried out using specially written APL functions.

Interrogation facilities are provided for the selection and printing of data. In addition, formal reports may be specified. These allow for multiple page heading lines, footnotes, automatic sub—totalling and summaries. Graphical output can also be produced by ADRS in the form of graphs, bar-charts and histograms.

ADRS is in use both within LOLA and in user Authorities and its applications include an Establishment List for Hillingdon and the Hackney Manpower Budgetting System

ADI

ADI stands for APL Data Interface. It is a collection of programs which enable a user with an APL terminal to interrogate extracts of any of LOLA's databases and files, and to obtain (more or less) immediate response to his enquiries.

ADI works on extracts of databases rather than live databases for several reasons:

1. If it worked on a live database it would 'shut out' IMS users of that database while it was working.

2. An extract contains only those data items generally required for analysis and is therefore smaller and hence quicker to access than a database.

3. Extracts from different databases can be combined into 1 file: e.g. Data from several payroll files plus the overtime control file plus the GPA personnel database can be merged into one combined extract.

4. Additional data can be added to an extract in two ways:

   a) by using ADI update functions to create new data items, derived from other items by calculation, e.g. the payroll files hold a rate of pay for each employee as a weekly or monthly value, depending on when he is paid. It is a simple matter to set up a new field, which holds an annual rate of pay.

   b) by adding additional records, either by entering them at the terminal or by conventional data preparation methods to produce a file of new data which is merged with the extract data as described at (3) above. An example of this is the addition of vacant post data to a payroll extract in order to produce an establishment file.

Once the parameters for the extract are defined by the user the extract is normally automatically refreshed every month, or to an agreed timetable.

Once the required extract of data is obtained, how do you use ADI to analyse it? The procedure is quite straightforward:

1. Logon at your APL terminal.
2. Load the ADI workspace: ')LOAD 10 ADI'
3. Enter 'INQ' : ADI then asks for a filename
4. Enter filename : ADI then asks you to enter criteria for selection of records.
5. Enter your selection criteria : ADI asks you to name the function that you wish to carry out

6. Enter the function name (see below) : after this you get up to 3 further prompts for additional parameters to enable ADI to execute the function requested.

That's all there is to it. The result of your enquiry is printed out at your terminal, or optionally via one of our high speed printers in the LOLA computer room at Enfield.

Functions: Here is a list of some of the most commonly used functions.

COUNT:	Count the number of records which satisfy your selection criteria. (Example : 'How many men over the age of fifty-five are employed by the borough?')
AVERAGE:	Obtain the average value of any fields(s) taken from your selected records. (Example : 'What is the average value of bonus paid to date for manual workers in the Technical Services Directorate?')
PRINT:	Print any data from your selected records (Example: 'list GPA reference, name, job designation and grade for all officers in the chief executives department'}.
SORT:	As PRINT, but sorted into a specific sequence.
SUM:	Sum the value of any field(s) by any other field(s). (Example : 'Produce a list showing the total rateable value for each sheet [street?] in the borough').
SUB:	As SUM, but additionally gives a count of the number of records summed.
SUBDET:	As SUB, but additionally prints a line for each individual record that is being summed. (Example : 'Print a list of all employees, analysed by overtime group, showing employee number, name, designation, and overtime earned to date, with subtotals of overtime for each group')
TOP:	Lists selected records in descending order of values of specified fields. (Example : 'List the top 50 overtime earners in Social Services, showing overtime earned, total gross pay to date, ratio of overtime pay to total pay, name, designation, grade and basic rate of pay')
FREQ:	Gives a frequency count per value of nominated field(s) (Example : 'What is the total no. of (a) 1 bedroom (b) 2 bedroom and (c) 3 bedroom council houses?')
CROSS:	Produces a cross-tabulation of 1 field by another. (Example : 'Produce an analysis of the number of borrowers per library per day for the period 14 July to 28 July')

- and there are many more! What is more, if there is not an ADI function to suit your specific needs, the chances are there is not an ADI function to suit your specific needs, the chances are that a small APL function can be written to satisfy your requirements.

1.0 INTRODUCTION AND OVERVIEW

1.1 DEFINITION OF THE INFORMATION CENTRE

The Information Centre is a function within a DP department with the task of helping end users to help themselves.

The IC has knowledge about:

- The environment that end users work in, that is, the company's internal policies and applications.
- Data processing techniques.

The IC provides end users with the right tools and products to access their data in the way they need it.

The IC provides end users with services not offered by the traditional data processing applications group.

1.2 OBJECTIVES OF THE INFORMATION CENTRE

Typical objectives of an IC are to:

- Help end users and DP to increase their productivity.
- Assist users in selecting the right approach and products for their applications.
- Provide personalized education.
- Provide direct support and assistance.
- Arrange access to authorized data.
- Provide and maintain data security procedures.
- Liaise with central DP department on behalf of the end users.
- Assist users in planning and justifying the use of resources.
- Provide technical and administrative support (for example. billing).
- Investigate new end-user application areas and future services.
- Promote IC facilities to user management and end users.

1.3 BENEFITS OF THE INFORMATION CENTRE

The likely benefits of the Information Centre are:

- For the executive management:
  - Improved responsiveness to business changes.
  - More productive end-user departments.
  - Improved decision support by data and alternative calculations.
  - More planning alternatives.

- For the central DP department:
  - Reduction of long-term development and maintenance load.
  - Minimization of day-to-day priority interruptions.
  - Central control of all personal computing.
  - Improved DP credibility in the company.
- For the end user:
  - Improved responsiveness to business needs.
  - Access to company data when it is required.
  - Increased productivity

2 Implementation Guide for an Information Centre