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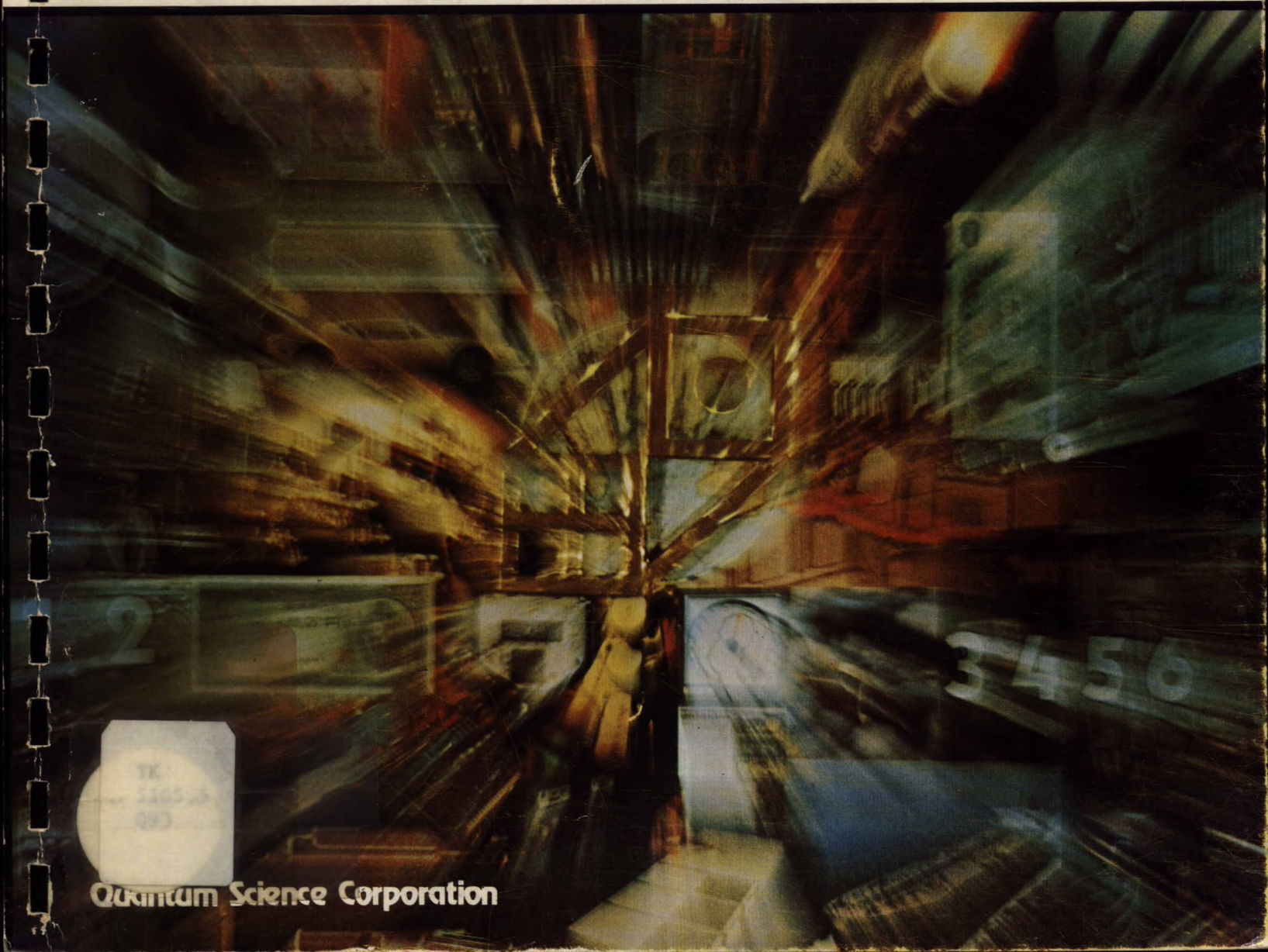
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Communications Research Centre

Department of Communications - Canada

COMPUTERCOMM - CANADA

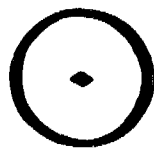
**RESULTS OF PROGRAM DEFINITION
STUDY IN NEEDS RESEARCH FOR
COMPUTER/COMMUNICATIONS
PRESENTATION**



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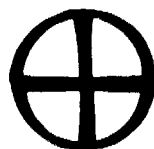
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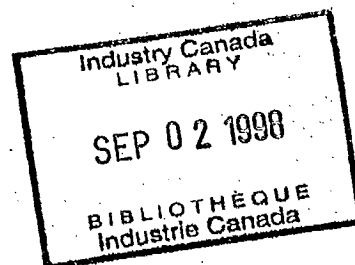
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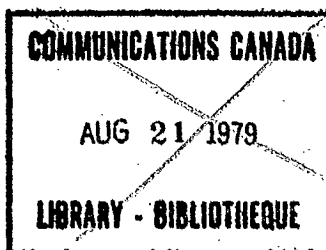


**COMMUNICATIONS RESEARCH CENTRE
DEPARTMENT OF COMMUNICATIONS
CANADA**

COMPUTER/COMM-CANADA

**Results of Program Definition Study
in Needs Research for Computer/Communications**

**Quantum Science Corporation
in association with
P.A. International Management Consultants
June 1st 1974**



LIST OF SLIDES

1. Title Slide
2. Users and Uses of Phase II Results
3. User and Uses
4. Phase II Options Summary
5. Utility vs. Price--Phase II Options
6. Phase II Options Schedules
7. Components of Phase II Outputs
8. Research Sectors
9. Geographic Regions
10. Flow of Research Data to Data Base and Report Series
11. Data Sources and User Universe
12. Interview Program
13. Field Research Program
14. Sectors and Applications
15. Terminal Classification
16. Economics Research Data Flow
17. Data Processing System Data Bases
18. Interaction of the Factors
19. Job Classification
20. Specification Contents
21. Specification Annexes

**COMPUTER/COMM-CANADA
PROGRAM DEFINITION STUDY**

USERS AND USES OF PHASE II RESULTS

USER	USE	POLICY				PROGRAMS				DESIGN			
	D.P./Model Scope	No EDP	Basic EDP	LE Model	Full Depth	No EDP	Basic EDP	LE Model	Full Depth	No EDP	Basic EDP	LE Model	Full Depth
DOC	All		X	X	X								
	Fed Gov/Pub Serv		X										
	Fed Gov												
DREE, DITC IDCCCCPPC, Others	All		X	X	X			X	X				
	Fed Gov/Pub Serv		X				X						
	Fed Gov	X				X							
Provincial Governments	All		X	X	X								
	Fed Gov/Pub Serv												
	Fed Gov												
Common Carriers	All						X	X	X				X
	Fed Gov/Pub Serv												
	Fed Gov												
Equipment Suppliers	All						X	X	X				
	Fed Gov/Pub Serv												
	Fed Gov												
Service Bureaux	All						X	X	X				
	Fed Gov/Pub Serv												
	Fed Gov												
End-Users	All						X	X	X				
	Fed Gov/Pub Serv												
	Fed Gov												

Note: The many possible approaches shown here have been covered in the six basic phase II options discussed in Exhibit 1 sections B3 and D.

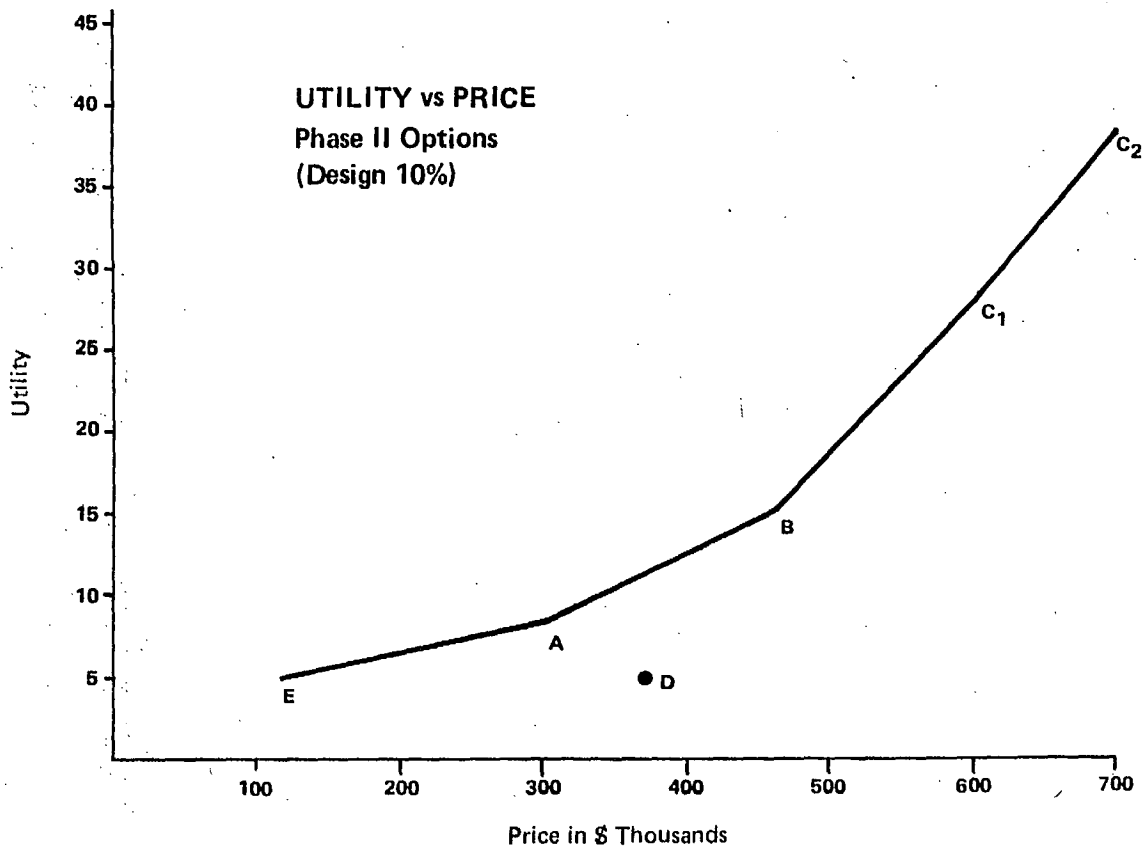
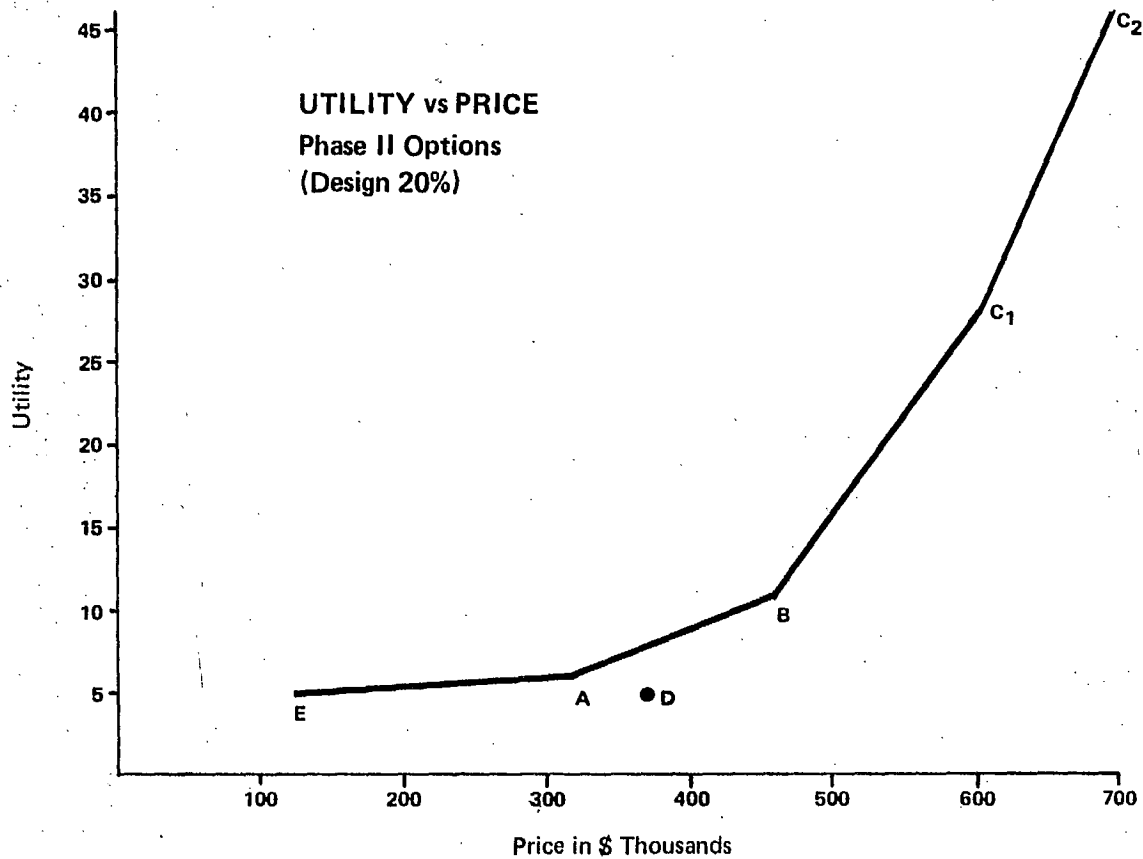
USER AND USES

USER \ USE		POLICY			
	Scope	No EDP	Basic EDP	L.E. Model	Full Depth
	All Sectors		A	B	C ₁
DOC	Fed. Gov./ Pub. Serv.		D		
	Fed. Gov.				

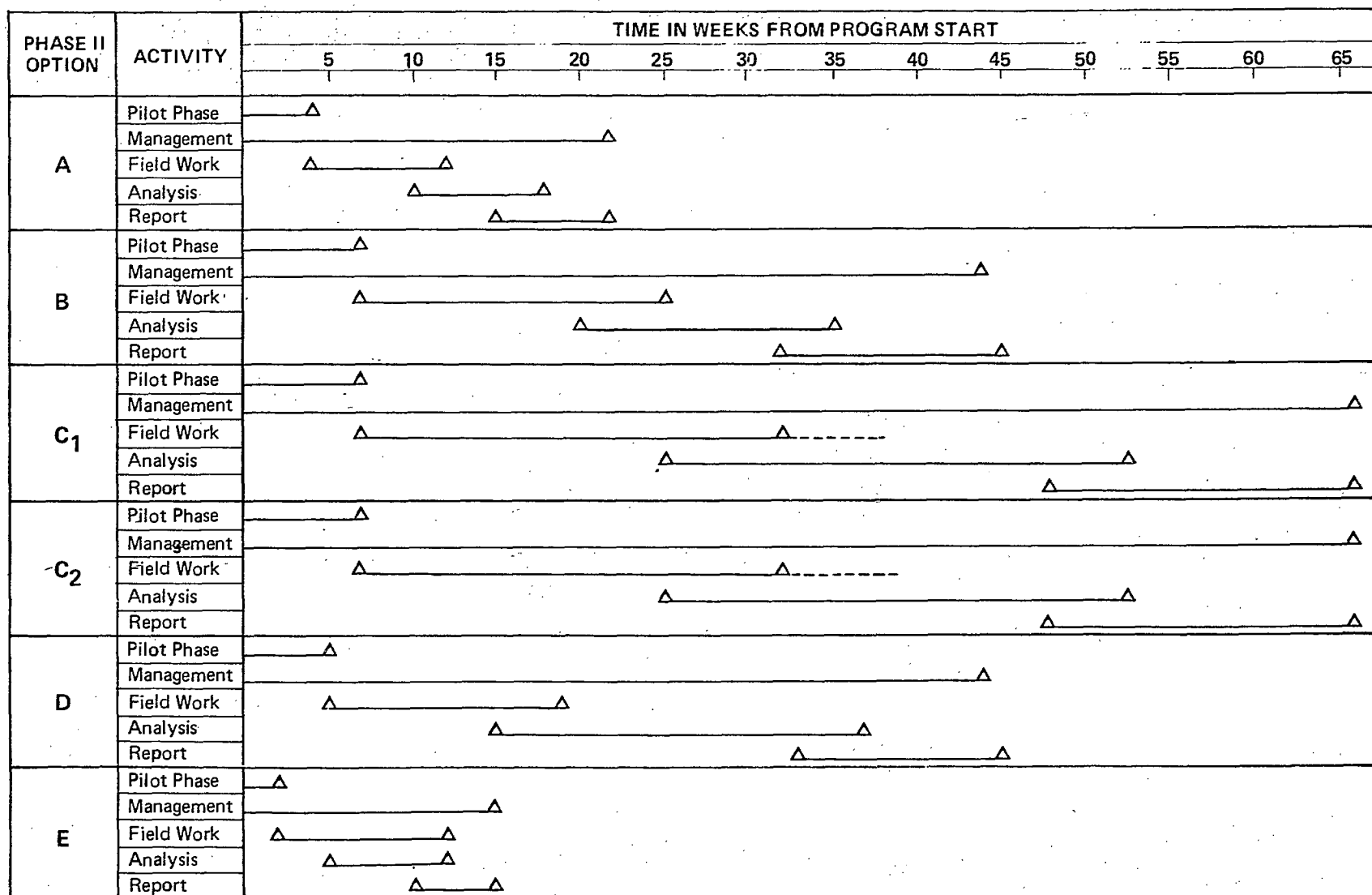
PHASE II OPTIONS SUMMARY

Phase II Option	Price \$ 000's	Man-weeks Effort	Time to Complete (in wks.)	Sectors Coverage	Interviews		Use of Models	Use of EDP	Geographic Resolution (Regions)	Elements of Forecasts	Use of Results
					IDQ	PQ					
A	\$316.3	163	22	11	160	—	Pro-rata	Very minimal	11	—Terminals (3 classes) —Traffic	Policy and Programs—Government and Industry
B	\$464.8	240	44	17	160	500	Leading Edge and Service Bureaux	Moderate	11	—Terminals (11 classes) —Traffic	Policy and Programs—Government and Industry
C1	\$609.0	313	66	17	160	500	Leading Edge, Service Bureaux and End-User	Extensive	11	—Terminals (11 classes) —Functional Systems —Traffic	Policy and Programs—Government and Industry
C2	\$692.9	361	66	17	160	500	Leading Edge, Service Bureaux End-User and PQ/Economics	Extensive	39	—Terminals (11 classes) —Functional Systems —Network Interface points —Traffic	Policy, Programs and Design, Government Industry and Carriers
D	\$372.6	193	44	4	70	—	Leading Edge	Moderage	11	—Terminals (11 classes) —Traffic	Policy and Programs—Government
E	\$118.3	58	15	1	40	—	Survey and Pro Rata	None	11	—Terminals (11 classes) —Traffic	Policy and Programs—Government

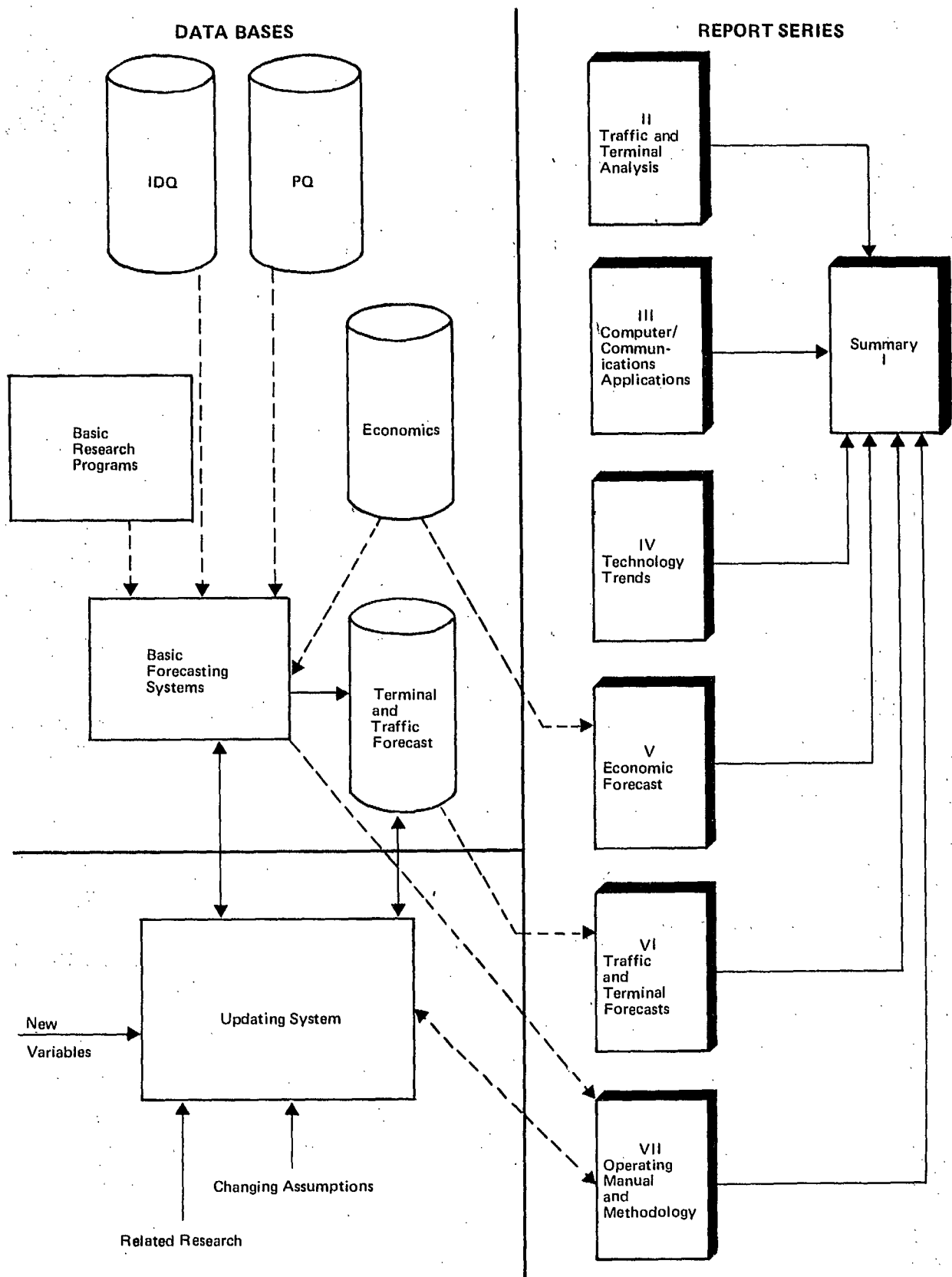
IDQ denotes = In-depth Questionnaire
PQ denotes = Postal Questionnaire



PHASE II OPTIONS SCHEDULES



COMPONENTS OF PHASE II OUTPUTS



RESEARCH SECTORS

Research Sector	Branch	B,C ₁ ,C ₂	A	D	E
PROCESS MANUFACTURING	Food, Beverages, Tobacco Textiles, Apparel, Leather Paper, Printing Chemicals Non-Metallic Minerals Basic Metals	✓	✓		
DISCRETE MANUFACTURING	Wood and Cork Fabricated Metal Non-Electric Machinery Electrical Machinery Transport Equipment Scientific Equipment Other Discrete	✓	✓		
AIR TRANSPORT	Air Transport and Airports	✓	✓		
BANKING AND FINANCIAL	Charter Banks	✓			
	Trust Companies	✓	✓		
	Finance Companies	✓			
	Investment Dealers	✓			
INSURANCE	Insurance	✓			
EDUCATION AND RESEARCH	Education Research and Scientific	✓	✓	✓	
HEALTH CARE	Medical, Dental, other health and veterinary services	✓	✓	✓	
GOVERNMENT	Federal Government	✓	✓	✓	✓
	Provincial and Municipal	✓		✓	
UTILITIES	Electricity, Gas Water Communication	✓	✓		
RETAIL/WHOLESALE	Wholesale Retail Trade Restaurants and Hotels	✓	✓		
DATA PROCESSING SERVICES	Computer Service Bureaux Data Processing and Tabulating Services Various information services and Data Base operations	✓	✓		
TRANSPORTATION (LESS AIR)	Railway Transport and Road Transport Water Transport Services Allied to Transport	✓	✓		
OTHER SECTORS	Agriculture Forestry Fishing Mining Construction Real Estate & Business Services (ex. 8323) Business, Associations Other social and community services Recreational and Cultural Services Personal and Household Services	✓			
TOTAL SECTORS		17	11	4	1

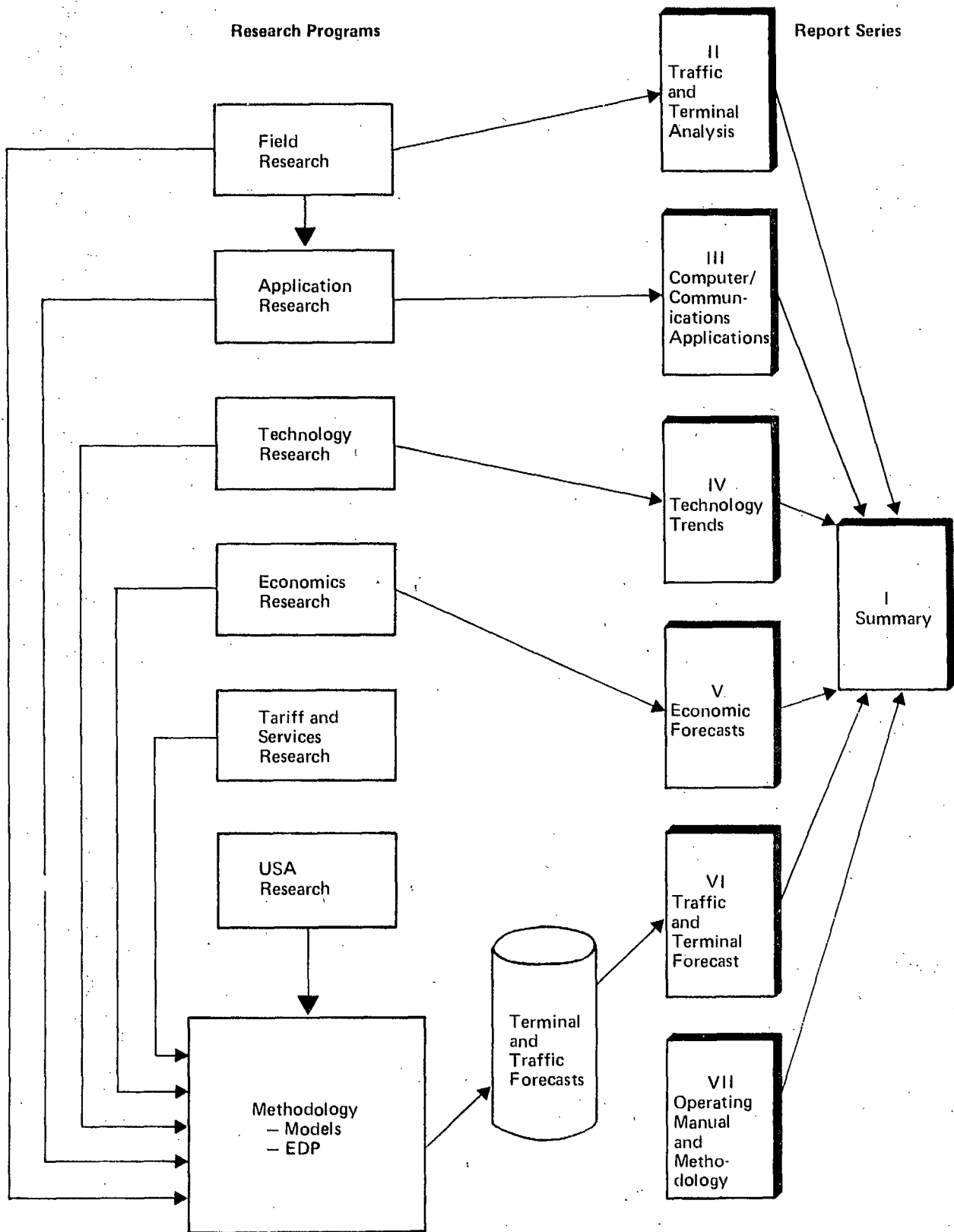
GEOGRAPHIC REGIONS

Regions		Options	
Province	Sub-Regions	C ₂	Others
Newfoundland		1	
Prince Edward Island		1	1 (Maritimes)
Nova Scotia		1	
New Brunswick		1	
Quebec	Montreal	4	2
	Laval City	2	
	Quebec City		
Ontario	Toronto	6	2
	Hamilton	8	
	Kitchener		
	London		
	Mississuaga		
	Ottawa		
	St. Catherines		
	Thunder Bay		
	Windsor		
Manitoba		1	1
Saskatchewan		1	1
Alberta		2	1
British Columbia	Vancouver	4	1
		1	
Canada—Total		33	9
U.S.A.		5	1
Rest of World		1	1
Total		39	11

Note: The principles of determining regions are as follows:

- at least one region per province (except Maritimes)
- divide province by major cities of over 1000,000 population.

FLOW OF RESEARCH DATA TO DATA BASE AND REPORT SERIES



USER UNIVERSE

CANDIDATES				
	CURRENT USER	IMMINENT USER	POTENTIAL USER	NON-CANDIDATE
IDENTIFIED	PERSONAL INTERVIEW POSTAL QUESTIONNAIRE DESK RESEARCH FORECAST INDIVIDUALLY	PERSONAL INTERVIEW POSTAL QUESTIONNAIRE DESK RESEARCH FORECAST INDIVIDUALLY	SELECTED PERSONAL INTERVIEWS POSTAL QUESTIONNAIRE DESK RESEARCH FORECAST BY MODELS	NOT APPLICABLE
UNIDENTIFIED	TREAT AS POTENTIAL USER – IF THEN IDENTIFIED TREAT AS USER	TREAT AS POTENTIAL USER – IF THEN IDENTIFIED TREAT AS USER	NO FIELD DATA, FORECAST BY MODELS	NOT APPLICABLE

DATA SOURCES

Interview Program--Number of IDQs

Sector \ Option	A	B	C₁	C₂	D	E
Government and Public Sector	70	70	70	70	70	40 (Fed Gov't only)
Data Processing Services	18	18	18	18	18	
Trade, Industry, Commerce	72	72	72	72	72	
Total	160	160	160	160	160	40

Field Research Program

Man-Weeks

Activity	Phase II Options					
	A	B	C ₁	C ₂	D	E
Management	5	7	8	10	,5	3
IDQ—Visits	32	32	32	32	14	8
PQ—Preparation and reduction	—	2	2	2	—	—
Analysis and Forecasting	16	30	46	62	28	16
Total Man-Weeks	53	71	88	106	47	27
IDQs	160	160	160	160	70	40

SECTORS AND APPLICATIONS

PROCESS MANUFACTURING

Administrative and Financial
Scientific and Engineering
Materials Management
Production Planning & Control
Distribution Planning & Control
Sales Planning & Control
Process Control
Other

DISCRETE MANUFACTURING

Administrative and Financial
Scientific and Engineering
Materials Management
Production Planning & Control
Distribution Planning & Control
Sales Planning & Control
Process Control
Other

AIR TRANSPORT

Administrative and Financial
Scientific and Engineering
Passenger Reservations
Ticketing
Freight Planning & Control
Maintenance Planning & Control
Other
Air Traffic Control

BANKING AND FINANCIAL

Administrative and Financial
Scientific and Engineering
Savings Accounting
Cheque Accounting
Loans and Mortgages
Fund Transfer
Giro
Credit Verification and Authorisation
Stockbroking
Other

GOVERNMENT

Administrative and Financial
Scientific and Engineering
Materials Management
Criminal Justice
Meteorological Monitoring & Analysis
Environmental Monitoring & Analysis
Defence
Transport Planning & Control
Other
Scientific & Engineering Services
General Business Services

UTILITIES

Administrative and Financial
Scientific and Engineering
Process Control
Customer Billing, Enquiry/Response
Facilities Assignment
Remote Meter Reading
Other

EDUCATION AND RESEARCH

Administrative and Financial
Scientific and Engineering
Operations Planning
Special Systems
Other

TRANSPORT (LESS AIR)

Administrative and Financial
Scientific and Engineering
Reservations
Ticketing
Freight Planning & Control
Maintenance Planning & Control
Other

INSURANCE

Administrative and Financial
Scientific and Engineering
Loans and Mortgages
Underwriting Data Enquiry
Underwriting Data Entry
Other

HEALTH CARE

Administrative and Financial
Scientific and Engineering
Patient Care
Special Medical Systems
Other

RETAIL/WHOLESALE

Administrative and Financial
Scientific and Engineering
Credit Verification & Authorisation
Order Entry/Inventory Control
Point-of-sale Data Collection
Other

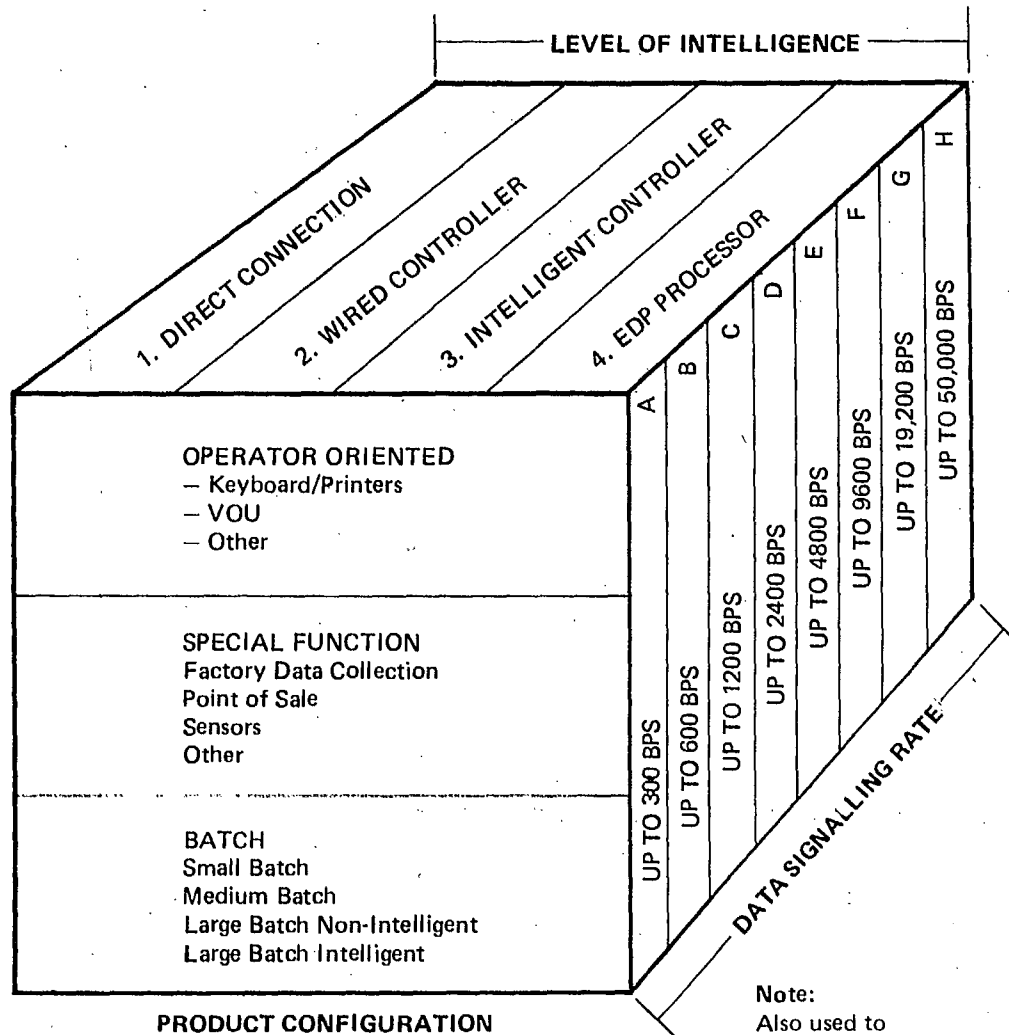
DATA PROCESSING SERVICES

Administrative and Financial
Scientific and Engineering
Credit Verification and Authorisation
Scientific and Engineering Services
General Business Services
Financial Database
Travel and Accommodation Database
Communications Services
Other

ALL OTHER SECTORS

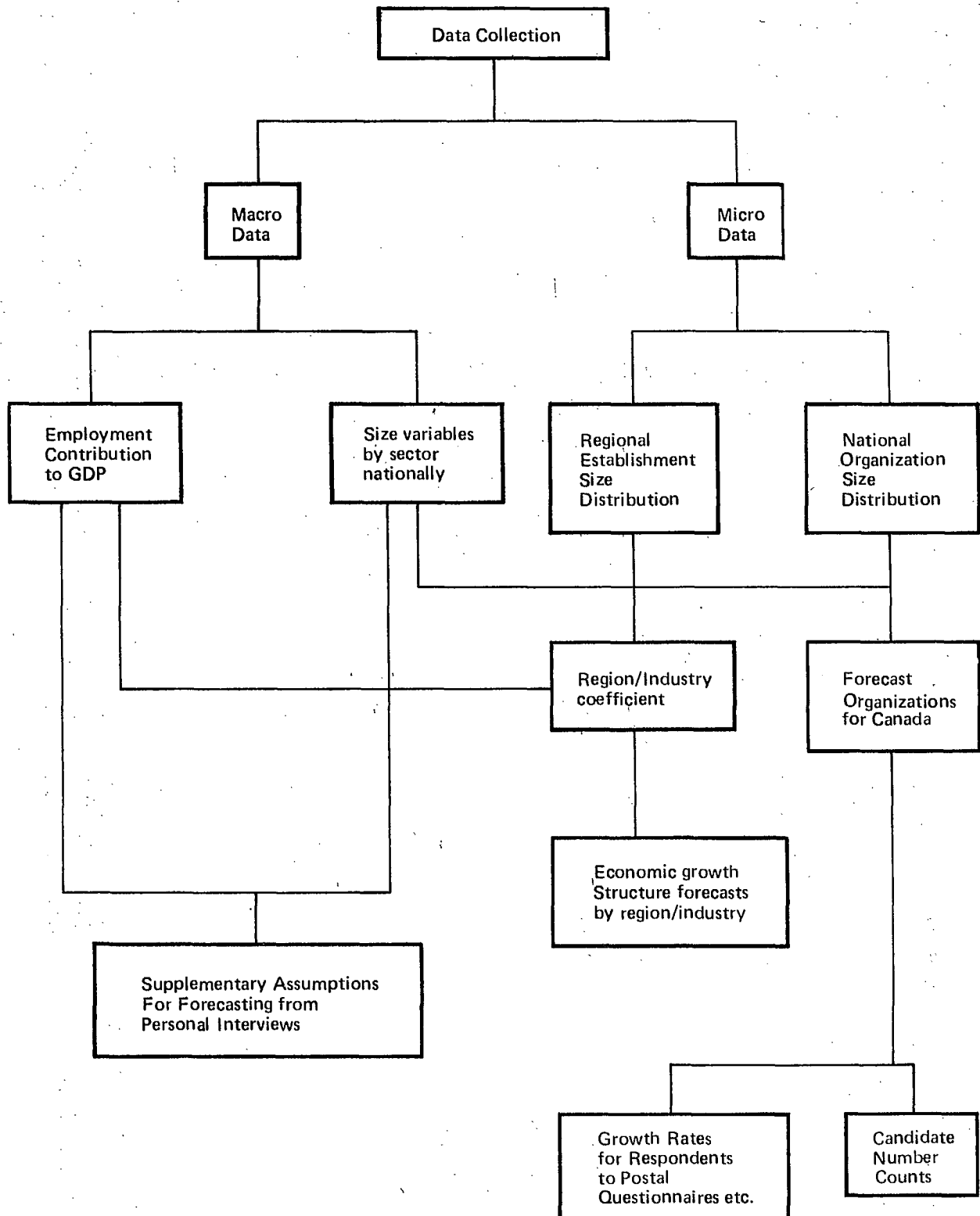
Administrative and Financial
Scientific and Engineering
Agriculture
Forestry
Fishing
Mining
Construction
Real Estate & Business Services
Business, Professional and Labour Associations
Recreational and Cultural Services
Personal and Household Services
Literary and Journalistic Services
News Agencies
Other

TERMINAL CLASSIFICATION

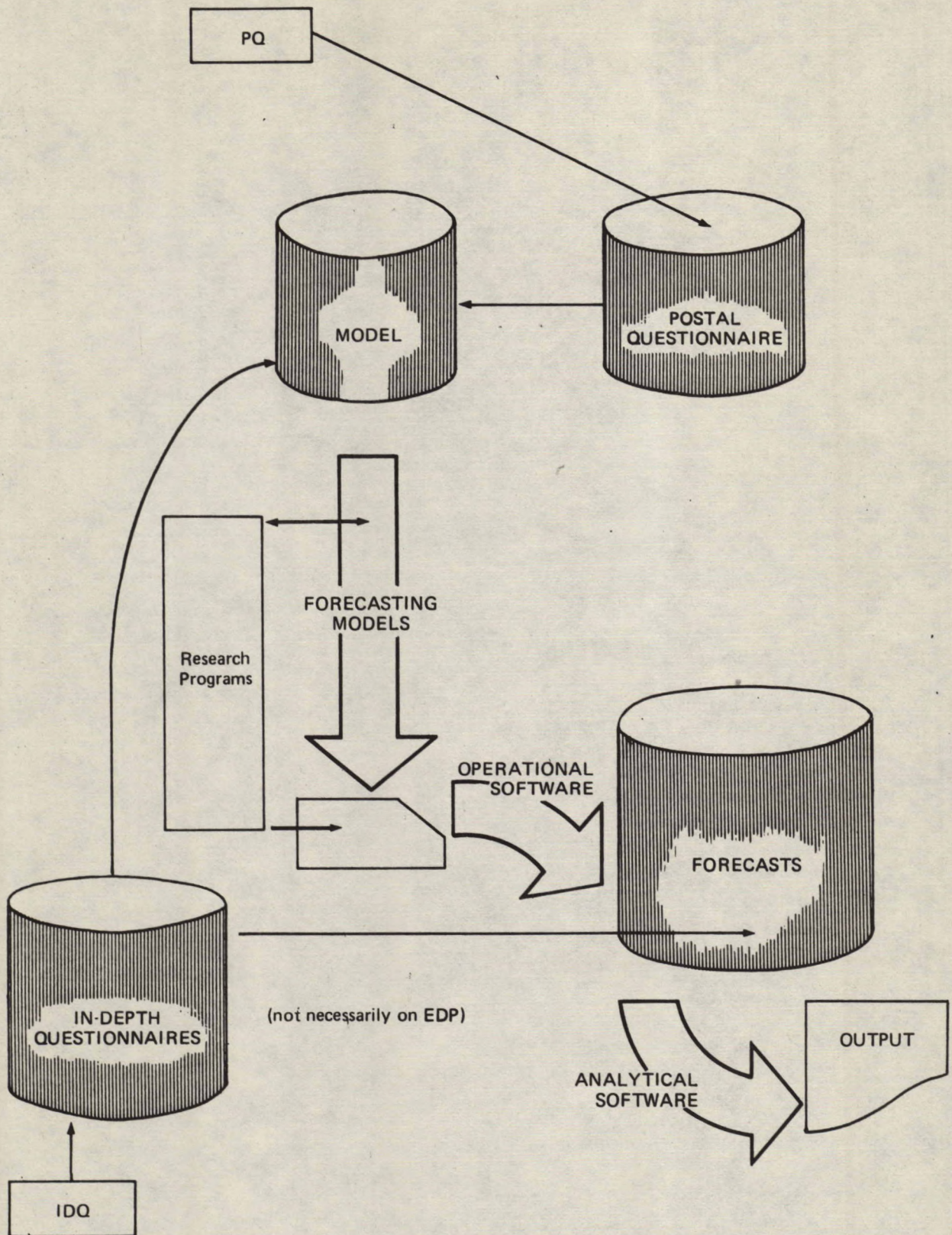


Note:
Also used to
categorize Network
Interface Points
for some Options.

ECONOMICS RESEARCH DATA FLOW



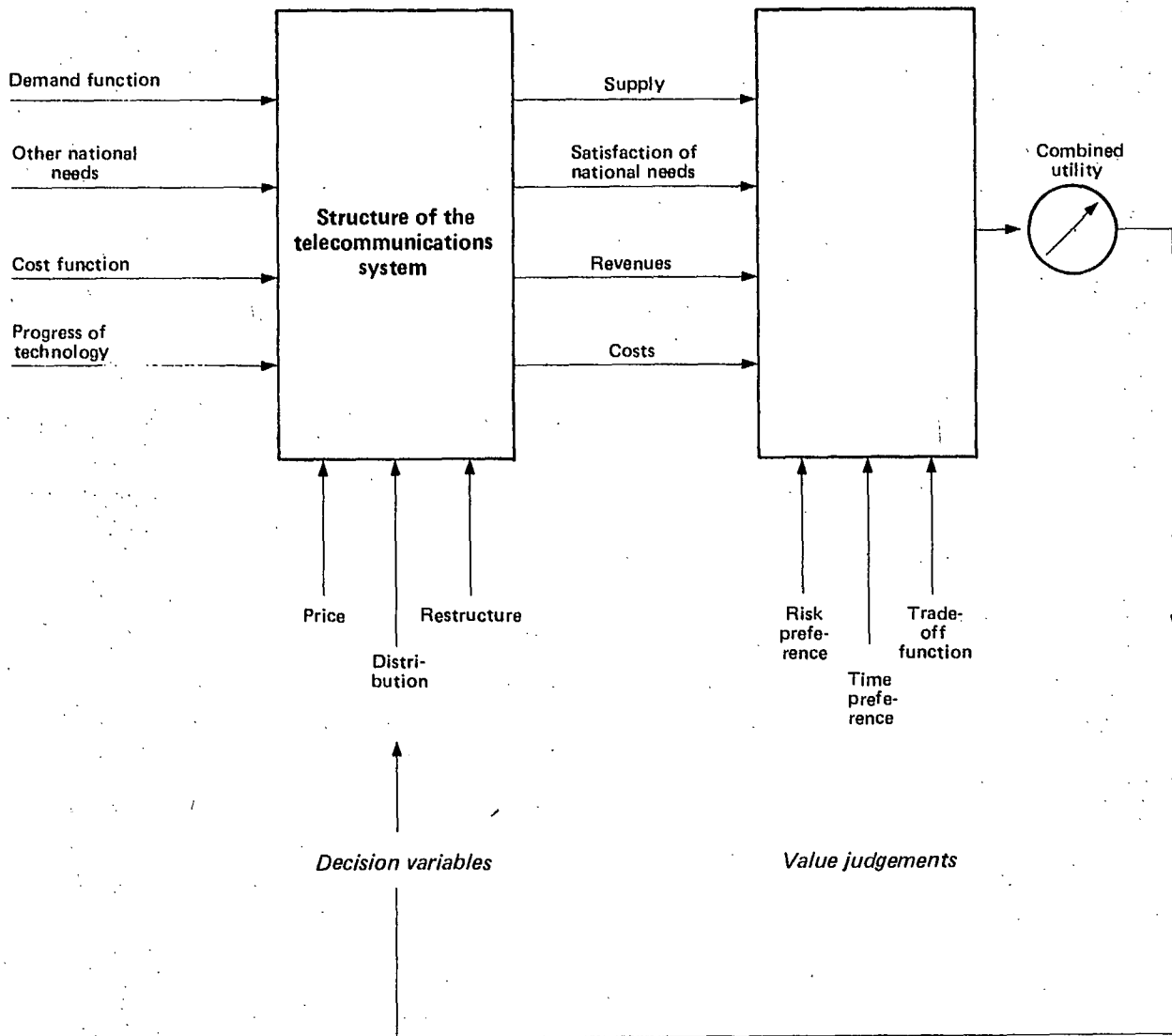
DATA PROCESSING SYSTEM DATA BASES



INTERACTION OF THE FACTORS

Input Variables

Outcomes



Job Classification	Fee Rate in \$/Day
Project Manager	\$450
Senior Operations Research Analyst	\$350
Systems Analyst/Programmer	\$290
Technology Analyst	\$400
Applications Analyst	\$350
Economist	\$250
Field Research Manager	\$350
Field Research Analyst	\$300
Data Analysis Clerk	\$ 30 (at cost)
Project Secretary	\$ 30 (at cost)

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ANNEXES

1. Summary of Services and Tariffs of Existing Computer/Communication Services
2. Suggested Geographic Regions
3. Suggested Research Sectors
4. Suggested Computer/Communications Applications List Definitions
5. Suggested Computer System Classification
6. Suggested Terminal and Network Interface Point Classification
7. DOC Organisation Chart

Note: These annexes have not been supplied. They can be prepared from information in this report and reference sources after a decision has been made on the Phase II option.

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