



FROM DB2 v7 TO DB2 v8: WHY TO DO IT ? EXPERIENCE IN I.N.P.S.

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I.N.P.S. ACTIVITIES



- *Liquidation and payment of either social security or assistance pensions.*
- *Assuring that pensions reach the minimum amount required by law.*
- *Withholding worker contributions; this will include other activities such as providing for medical visits, etc.*

USERS



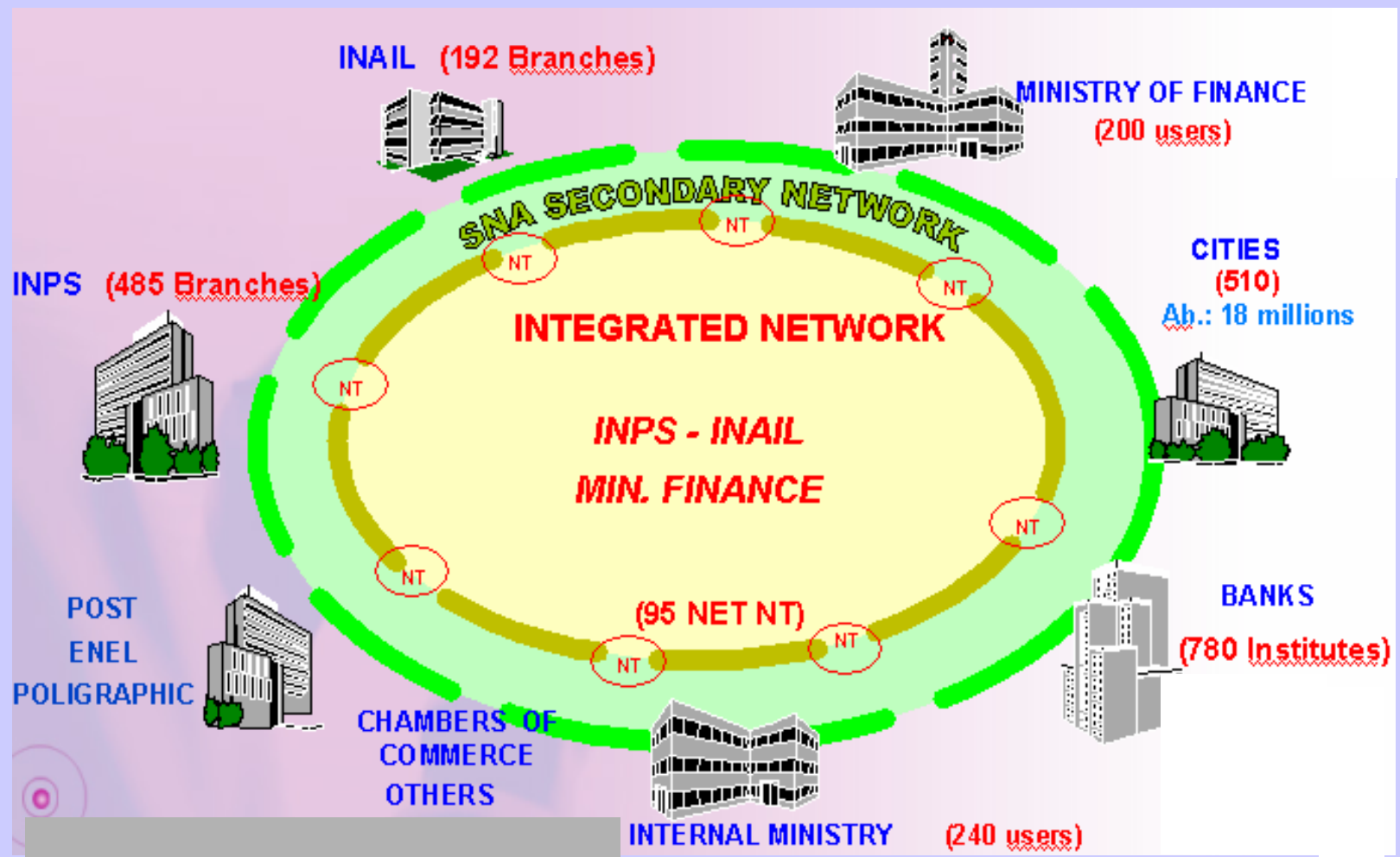
- 19.000.000 INSURED
- 14.500.000 PENSIONERS
- 1.358.000 BUSINESS
- 3.182.000 INDIVIDUALS

ARTISANS: 1.675.000
 RETAILERS: 1.507.000

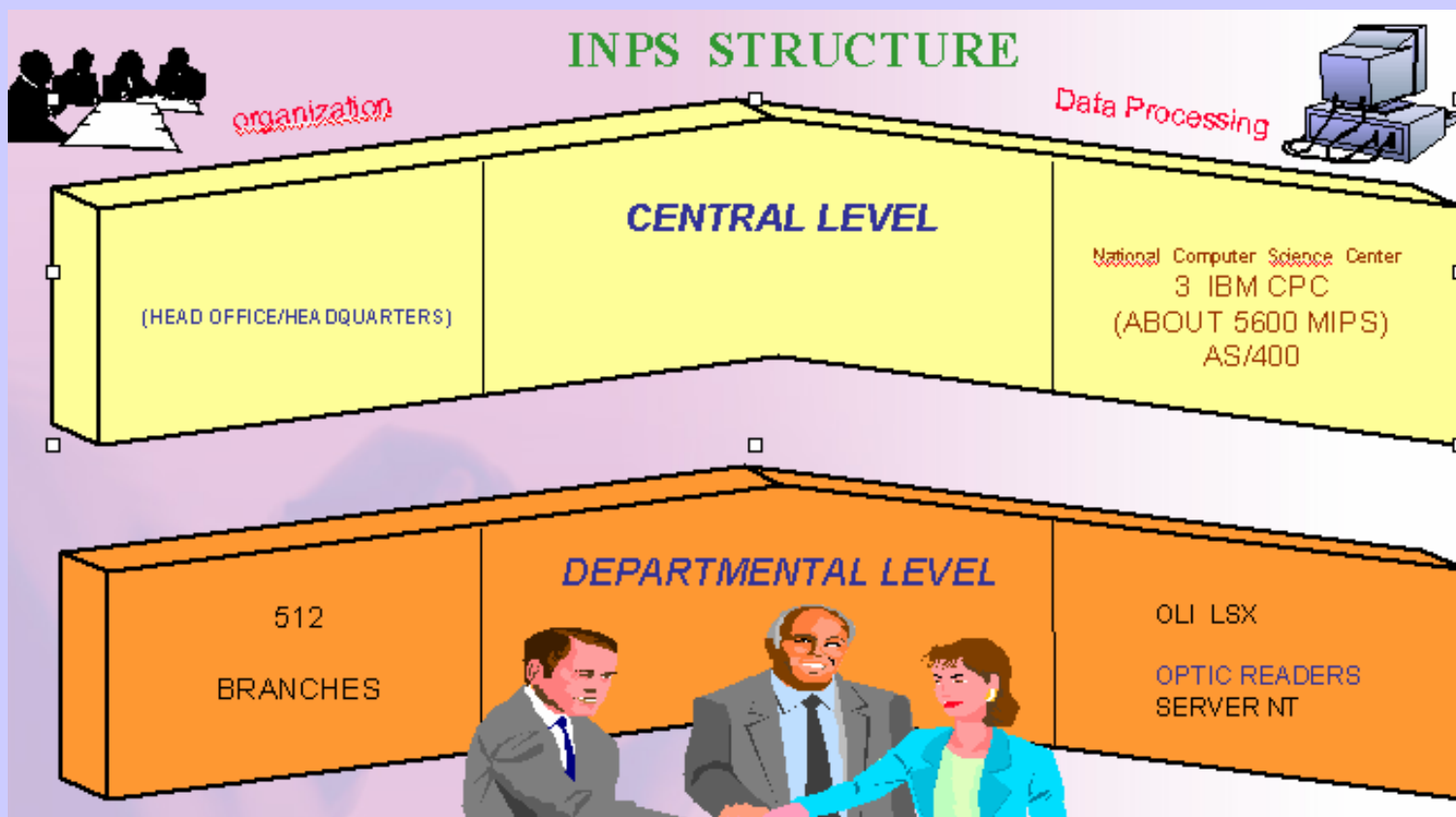




I.N.P.S. TELEMATIC NETWORK



I.N.P.S. STRUCTURE





I.N.P.S. PRINCIPAL ARCHIVES (IN MILLIONS)

<u>Principals Archives</u>		AMOUNT		NETINPS	
		HISTORICAL	ACTIVE	TRANSACTIONS	ENVIRONMENT
BUSINESS		4,5	1,2	HIDRA	IMSDM
DEPENDENT WORKERS	O1/M ARPA	47,8 20,6	14,5	HIDRA ARPA	IMSDM CXRG
ARTISANS		5,9	1,7	ARTCO	IMSPN
RETAILERS		5,0	1,6	ARTCO	IMSPN
AGRICULTURAL WORKERS		13,0	2,6	RAMA	CX1Lcc
CROSS CHECKING		SICI	IMSDM
DOMESTIC WORKERS		1,5	0,3	RAMA	CX1L
PENSIONERS		22,5	14,5	GAPE	IMSPN

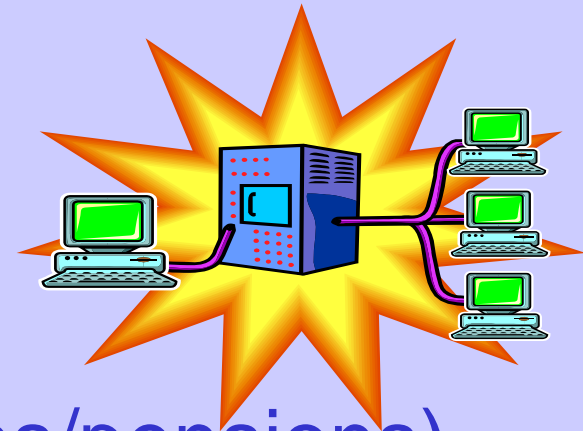
I.N.P.S. SYSTEMS

❖ zSeries platform

- 3 IBM mainframes
 - 2 for production (contributions/pensions)
 - 1 for development

❖ iSeries platform

- 216 (lpar)
- management of branches applications

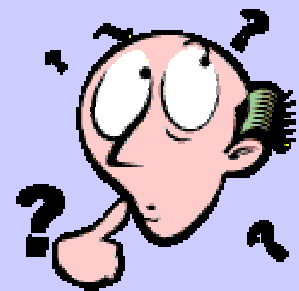




INPS strategy

- *To safeguard Welfare in a turbulent economic context, adapting to social changes (demographic trends,) and financial parameters (financial laws)*
- *To assure healthy accounting, with right balancing between income (contributions, credits, vigilance) and outcome (pensions, family allowance, indemnities, etc.). INPS has the second account in Italy after fiscal*
- *Transforming INPS in “Digital Service Company” (WEB Company) through a complete review of a complex set of elements:*
 - *Administrative*
 - *Organizational*
 - *Technical*
- *Address the whole set of INPS “clients” (citizen or employer) in flexible, transparent way, serving them “where they are” with multichannel contacts*
- *Lead the process of integration and synergy within Social Security environment, extending to other PA organizations*

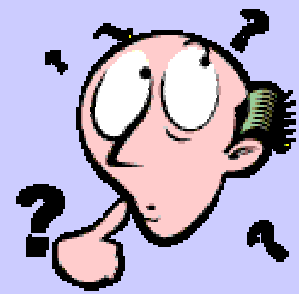
WHY DB2 v8?



➤ *Business needs*

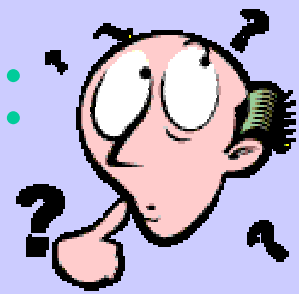
- *Italian Social Security Integration*
- *Improve processes quality and communication to users*
- *Increase of income*
- *Vigilance on contributive duties (i.e. mitigate fraud)*
- *Reduction of legal claims*
- *Time reduction to provide pension (working in “real time”)*
- *Personnel qualification and motivation*
- *Define policy for immigration and for complementary pensions*
- *Improve security according to law duties*

WHY DB2 v8?



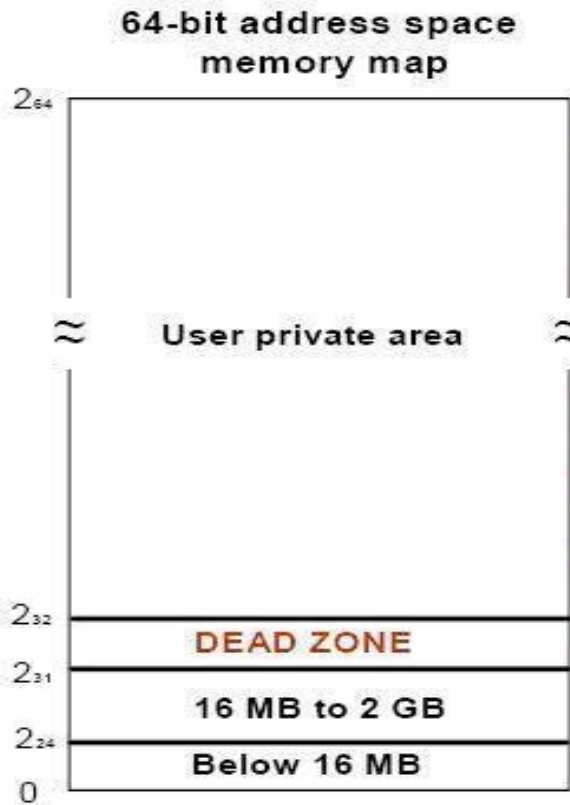
- ***Current requirements:***
 - ***large amount of data treated***
 - ***business continuity***
 - ***high availability***
 - ***Java and the web***
 - ***Queries and data warehouses***
 - ***Migrating and porting applications***

DB2 v8 meets these needs:

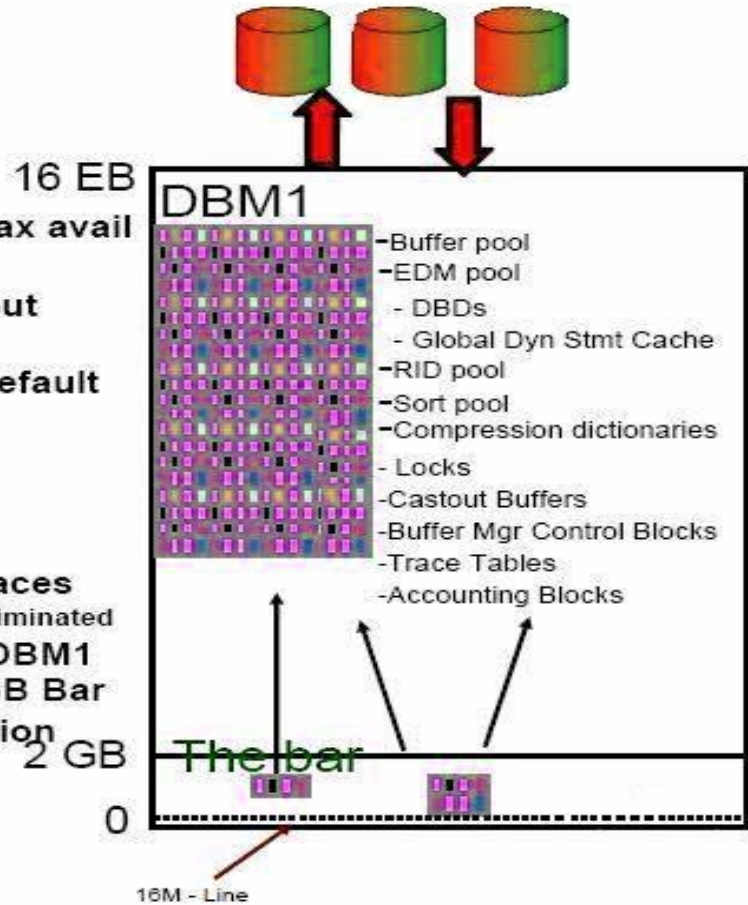


- **Availability**
 - *data sharing*
 - *utility evolution*
 - *virtual storage cushioning*
- **Service Level and Performance**
 - *function push down (referential integrity, triggers, UDF, Stored Procedures)*
 - *caching*
 - *SQL Optimization*
- **Scalability**
 - *data, metadata, subsystem*
 - *partitioning*
- **Business Continuity**
 - *virtual storage 2 GB*
 - *partitions from 254 tp 4096*
 - *Active logs from 31 to 93*
 - *table size from 16 TB to 128TB*
 - *index key from 255 to 2000*

64 BIT EVOLUTION (VIRTUAL STORAGE RELIEF)



- Max BP size is 1TB (or max avail memory)
- Max Read, Write, & Castout engines to 600
- BP0 min 2000 (was 56), default 20000
- BP8K0 default 1000
- BP16K0 default 500
- BP32K default 250
- No Hiperpools or Dataspaces
 - Dataspace lookaside pool eliminated
- IFCIDs 217 & 225 reflect DBM1 storage above / below 2GB Bar
- No Bimodal accommodation



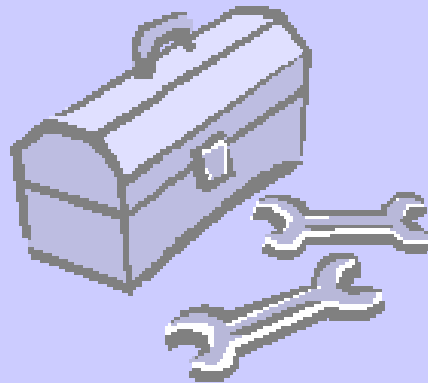


FINALLY IN DB2 v8

- *Continuous availability*
- *Schema evolution: database changes*
- *Data partitioned secondary indexes (DPSI)*
- *System-level point in time recovery*
- *Improved lpl recovery*
- *Additional online zparms*
- *Sliding scale algorithm for sqty*
- *Increasing the maximum number of active log data sets and archive log volumes*



IBM DB2 TOOLS





IBM Information Management Tools

- DB2 Administrator
- DB2 Log Analysis
- DB2 Performance Expert
- DB2 Object Restore
- DB2 Change Accumulation
- DB2 Utility Suite



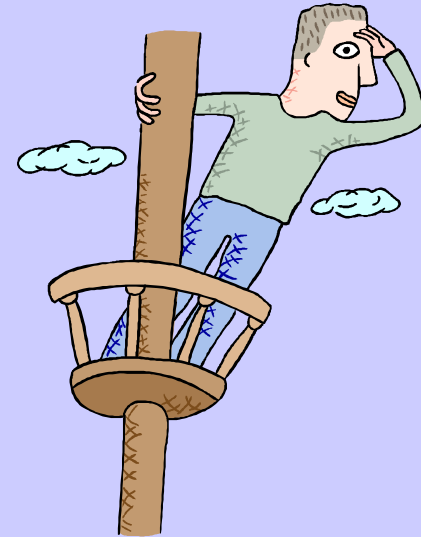
DB2 ADMINISTRATION TOOL

Our primary reasons for using these tools are to:

- *Navigate DB2's system catalog*
- *Perform migrations and alterations of tables, etc*
- *Bind/Rebind plans and packages.*
- *Perform grants/revokes on DB2 objects.*
- *Generate ad-hoc one-time use utilities.*
- *Modify and regenerate views.*

What we appreciate in CATALOG Navigation:

- *Online Help*
- *Primary/Line cmds*
- *Drill up/down*
- *Filtering*
- *Display detail info*
- *Extract DDL*
- *Explain SQL statements*



DB2 LOG ANALYSIS



We use this tool to generate audit reports,daily incremental load files of changed records, undo/redo scripts.

- *Quickly isolates accidental or undesired changes to your database tables*
- *selectively reverses these changes*
- *selectively repeats specific transactions after large scale reversals of data changes*
- *locates changes that are made to one database and copies the changes to another database*
- *Reduces Downtime and the Numbers of Recovery on DB2 Databases*



Conclusions:

- *IT in INPS is perceived as the main strategic element for the successful achievement of its objectives*

- *The migration to DB2 V8 has make easier to INPS to reach the follow items:*
 - *to improve quality of processes and communication vs. its customers – to reach almost 95% of services automated*
 - *To optimize IT Infrastructure and reduce cost (resource sharing, consolidation, business continuity, etc.)*
 - *To rationalize ICT services and applications (improve synergy within Welfare by SOA implementation)*
 - *To reduce duplication and overlapping (application reuse)*
 - *To improve efficiency (automation, business intelligence)*
 - *To increase levels of Security and SLA*

QUESTIONS ?



BIBLIOGRAPHY

- INSTALLATION GUIDE
- DATA SHARING PLANNING AND ADMINISTRATION
- ADMINISTRATION AND PROGRAMMING GUIDE
- RELEASE PLANNING GUIDE
- V8 TECHNICAL PREVIEW
- V8 WHAT'S NEW





From DB2 v7 to DB2 v8: how to do it ? Experience in I.N.P.S.

THANK YOU!



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