Lesson 5
Business Processes

Business Process

- A series of activities
- A collection of interrelated structured activities or tasks or processes which follow a logical sequence.
- One that serves a particular specific result.
- Example: Business Process Tracking of RFID labeled

Business Processes in an Enterprise

- Example: Inventory Control process in an Enterprise using IoT of RFIDs
- May have number of interrelated processes which serves a particular result or goal.

Business process Types

- Several types
- Operational
- Support
- Service
- Management.

Business Process

- A representation or *process matrix* or flowchart of a sequence of activities with interleaving decision points

Process Matrix

- Number of elements
- Each element may represent series of operations and activities on given set of inputs that perform a specific task leading to a decision point in the process.

Distributed Business Process (DBPs)

- A collection of logically interrelated business processes in an Enterprise network

- A software system that manages the distributed BPs

DBPs Features

- A collection of logically related business processes,

- Cooperation between the processes in a transparent manner

- Each user within the system may access all of the process decisions within all of the business processes as if they were a single business process

DBPs Features

- Location independence
- Enterprise business Intelligence unaware of where the processes are located

DBP Features

- Possible to move the results of analytics and knowledge from one physical location to another without affecting the user.

Interrelationships in the distributed BPs

- Enterprise layer Business process 1(EBP1) interrelates directly with the Device and Gateway layer Business Process 4 (DGBP4) [Refer Fig. 5.3]
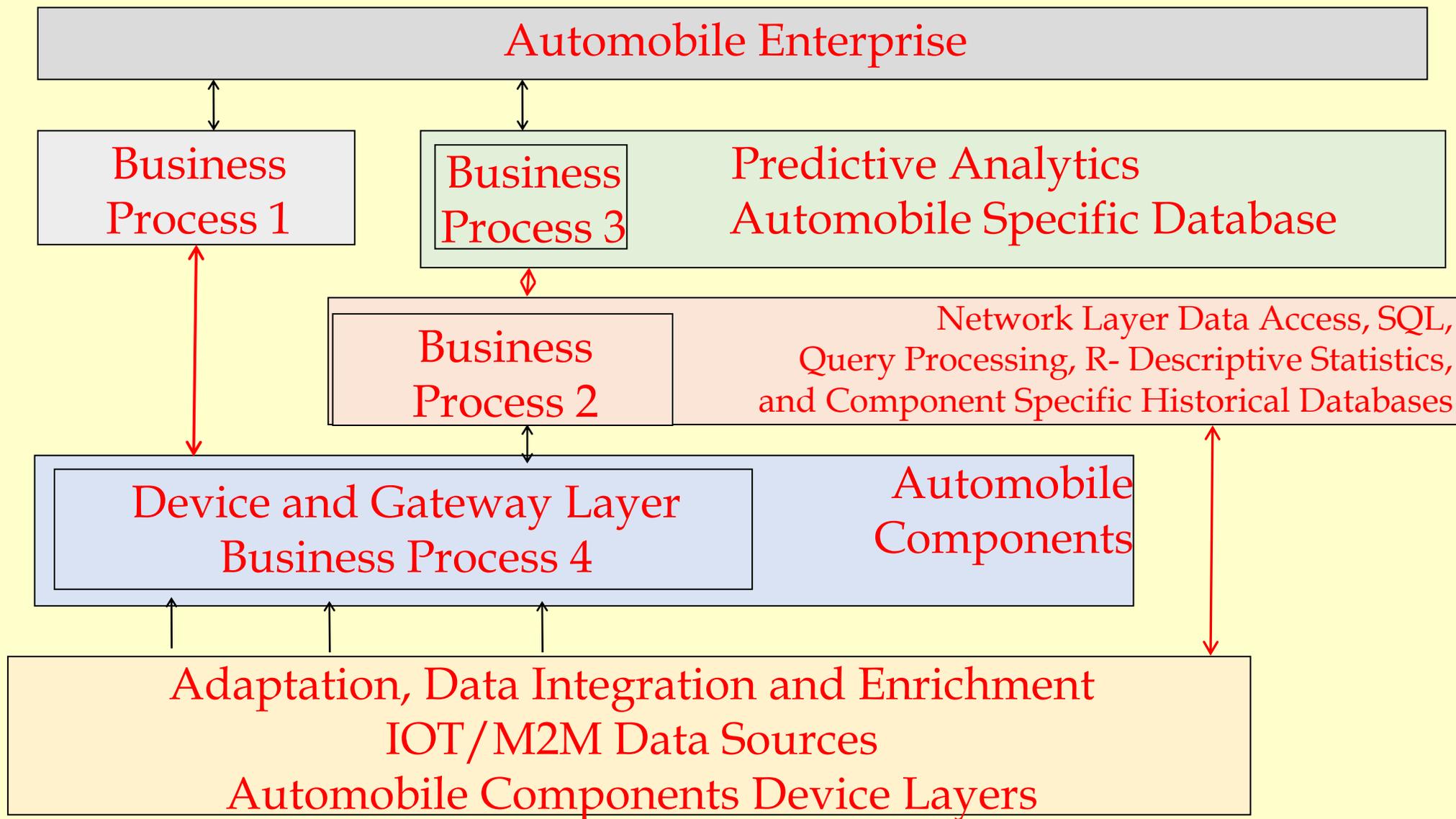
Fig. 5.3 Distributed Business Processes at Enterprise, Network and Device/Gateway Layers

Interrelationships in the distributed BPs

- EBP1 interacts with device data, Adaptation, Data Integration and Enrichment layer for a specific automobile.

- EBP1 analytics with the non-historical data.

Network layer Business process

- Network layer Business process 2 (NBP2) interrelates directly with the Enterprise layer Business Process 3 (EBP3).

NBP2

- Uses the Data Access, SQL, Query Processing, R-Descriptive Statistics, and Component Specific Historical Databases.

- Has access to data of number of automobile of same model as one sending data to EBP1.

EBP3

- EBP3 analytics interacts with the other automobiles databases and historical databases
- Enables predictive and prescriptive Analytics

NBP2

- NBP2 interrelates also directly with the DGBP4 updating the database for the NBP2.

Summary

We learnt

- Business process consists of a series of activities
- A collection of interrelated structured activities or tasks or processes which follow a logical sequence.

Summary

We learnt

- Process matrix number of elements.
- Element may represent series of operations and activities on given set of inputs

Summary

We learnt

- Distributed business process system (DBPs) is a collection of logically interrelated business processes in an Enterprise network.

Summary

We learnt

- Distribution of processes reduces the complexity, communication costs, faster responses and smaller processing load at the central system

End of Lesson 5 on Business Processes