

Create a Universe: The SAP BusinessObjects Semantic Layer



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The Semantic Layer

1.Goals

2.What is it?

3.How it is used?

4.All clients

5.All sources

6.Conclusions

THE SEMANTIC LAYER

Semantic Layer Reduces Time to Business Intelligence

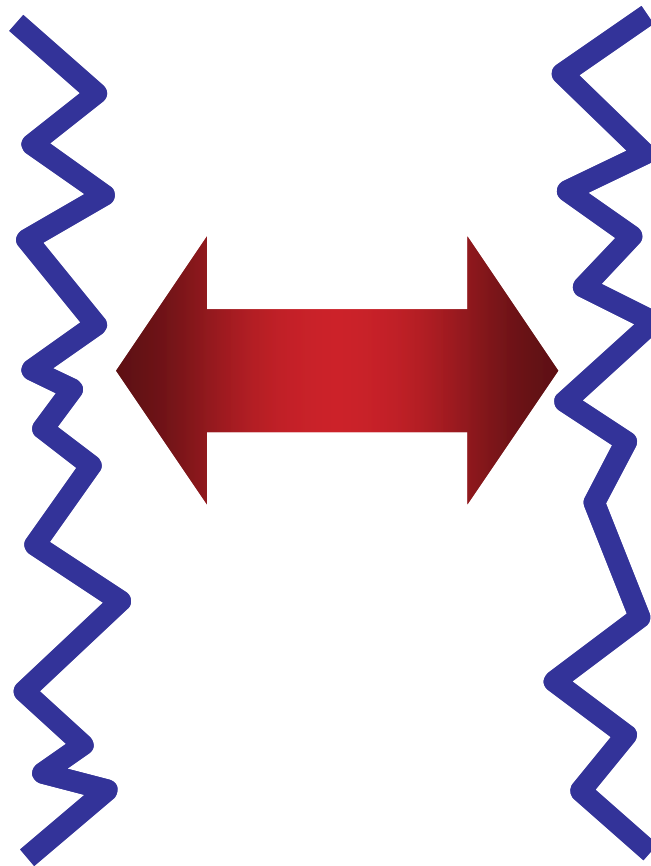


Business Needs



- Need timely access to data
- Changing business requirements
- Making decisions on trusted information

Time-to-trusted Information

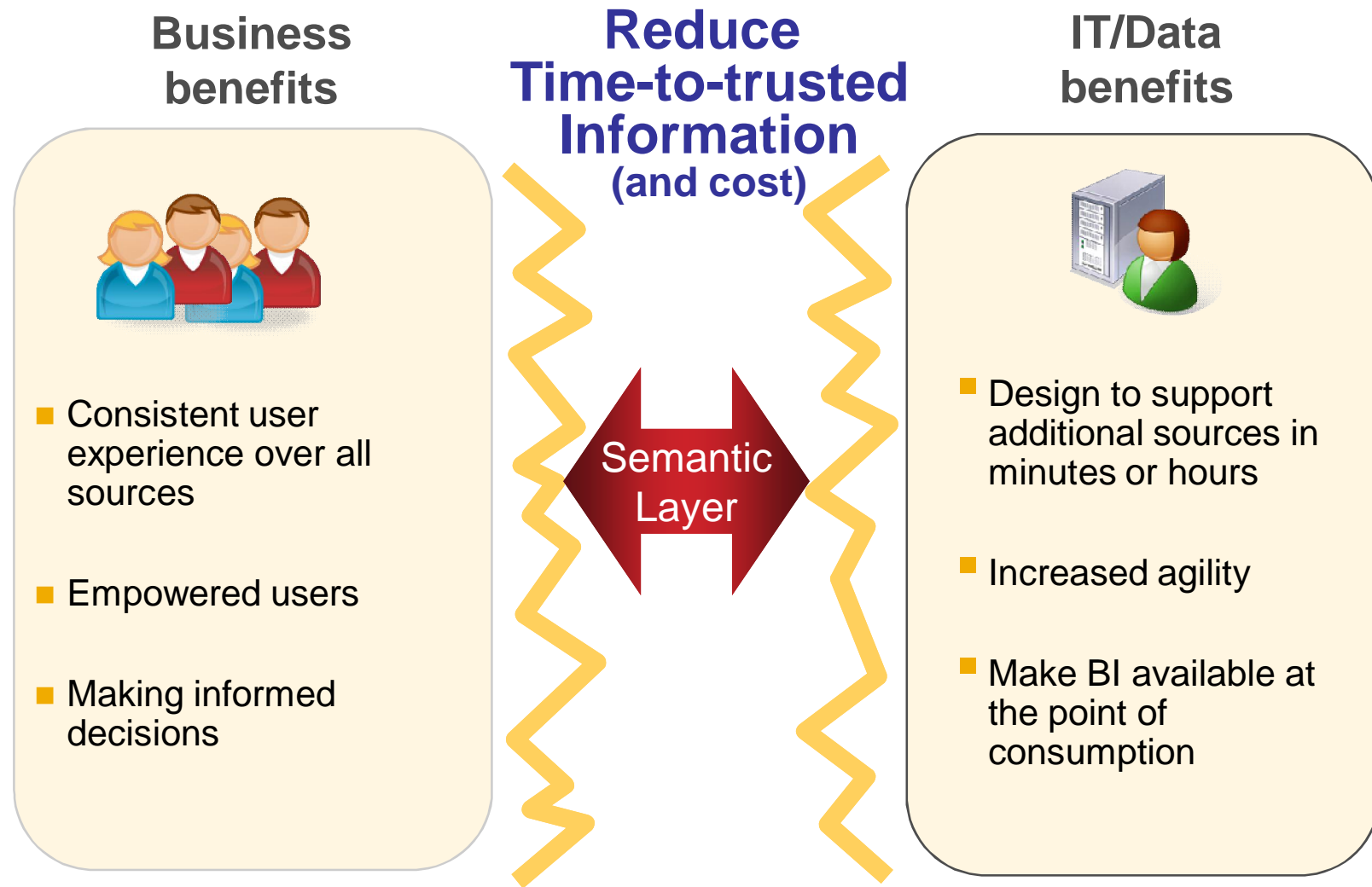


IT/Data Bottlenecks

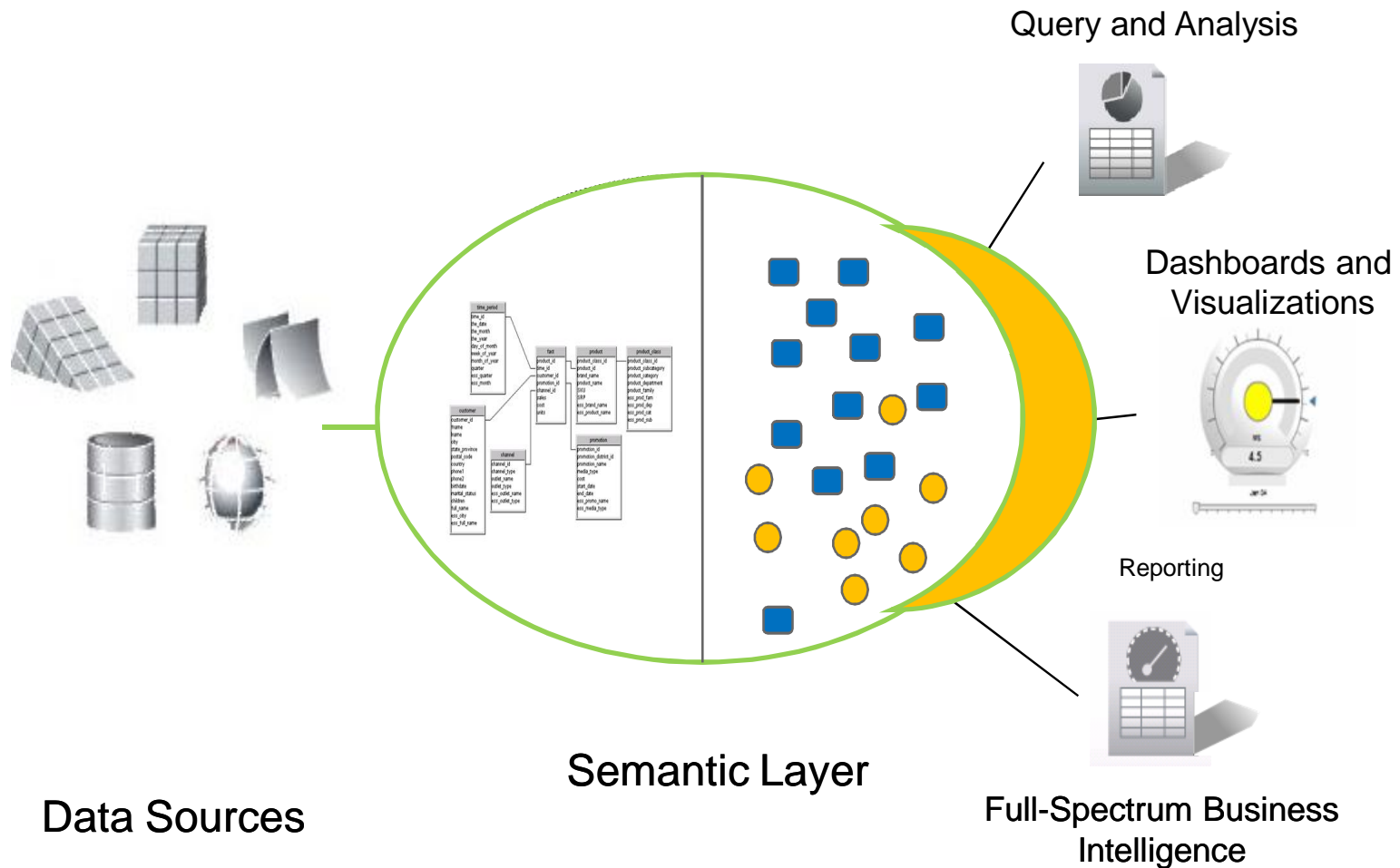


- Limited capacity to support users
- Competing priorities
- Lengthy ETL development cycles

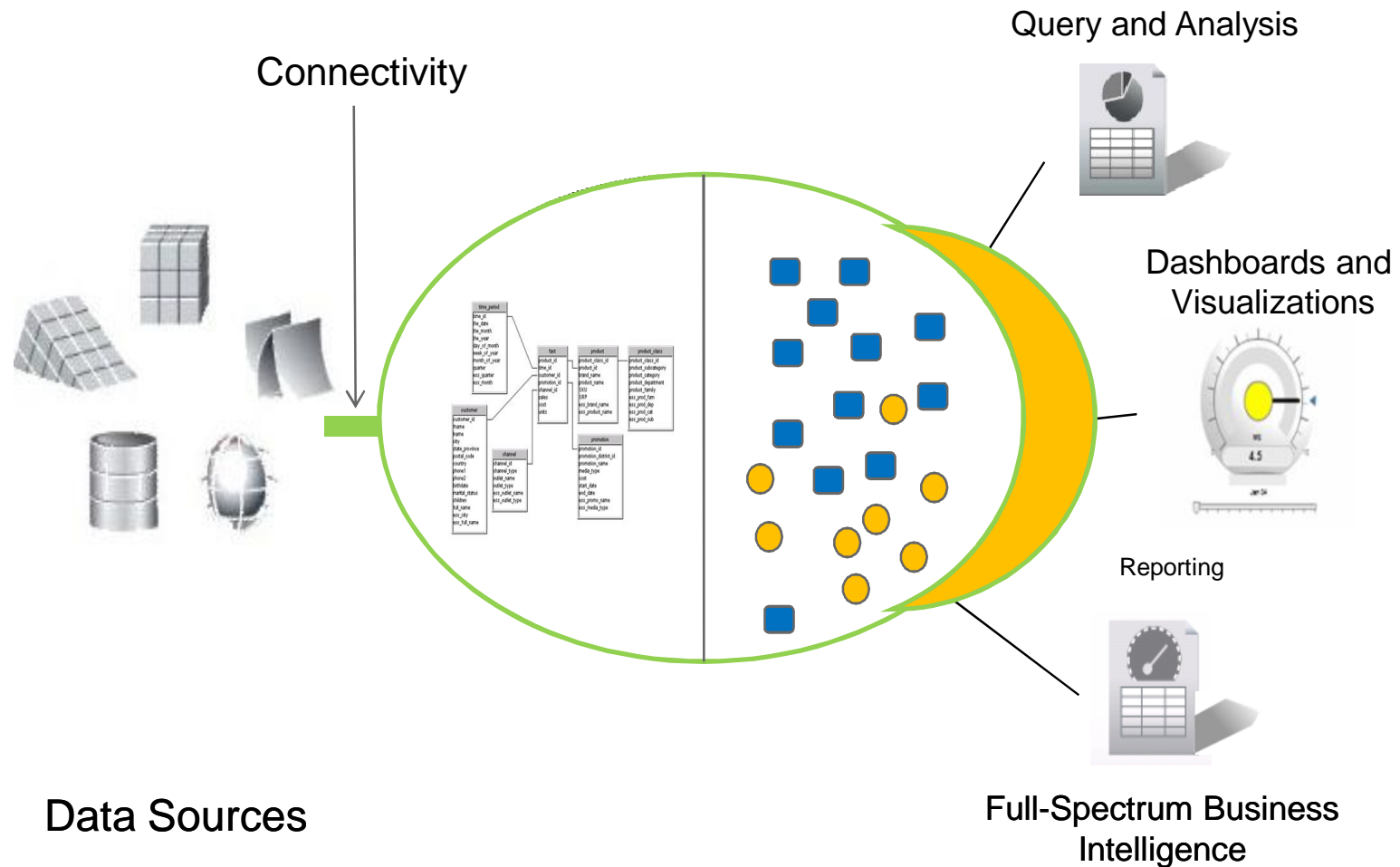
Semantic Layer Reduces Time to Business Intelligence



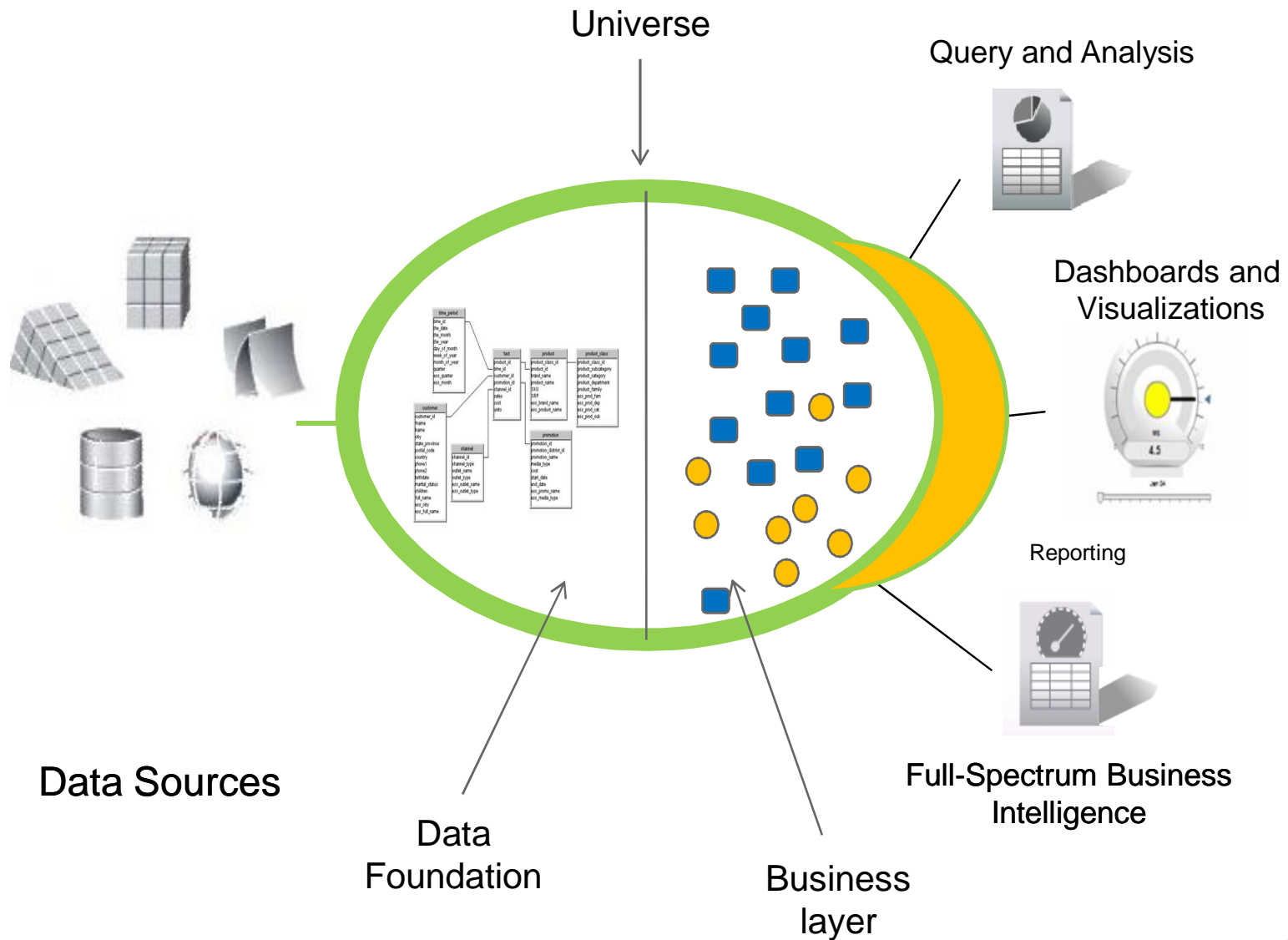
The Semantic Layer provides a secured access to data with simple business terms



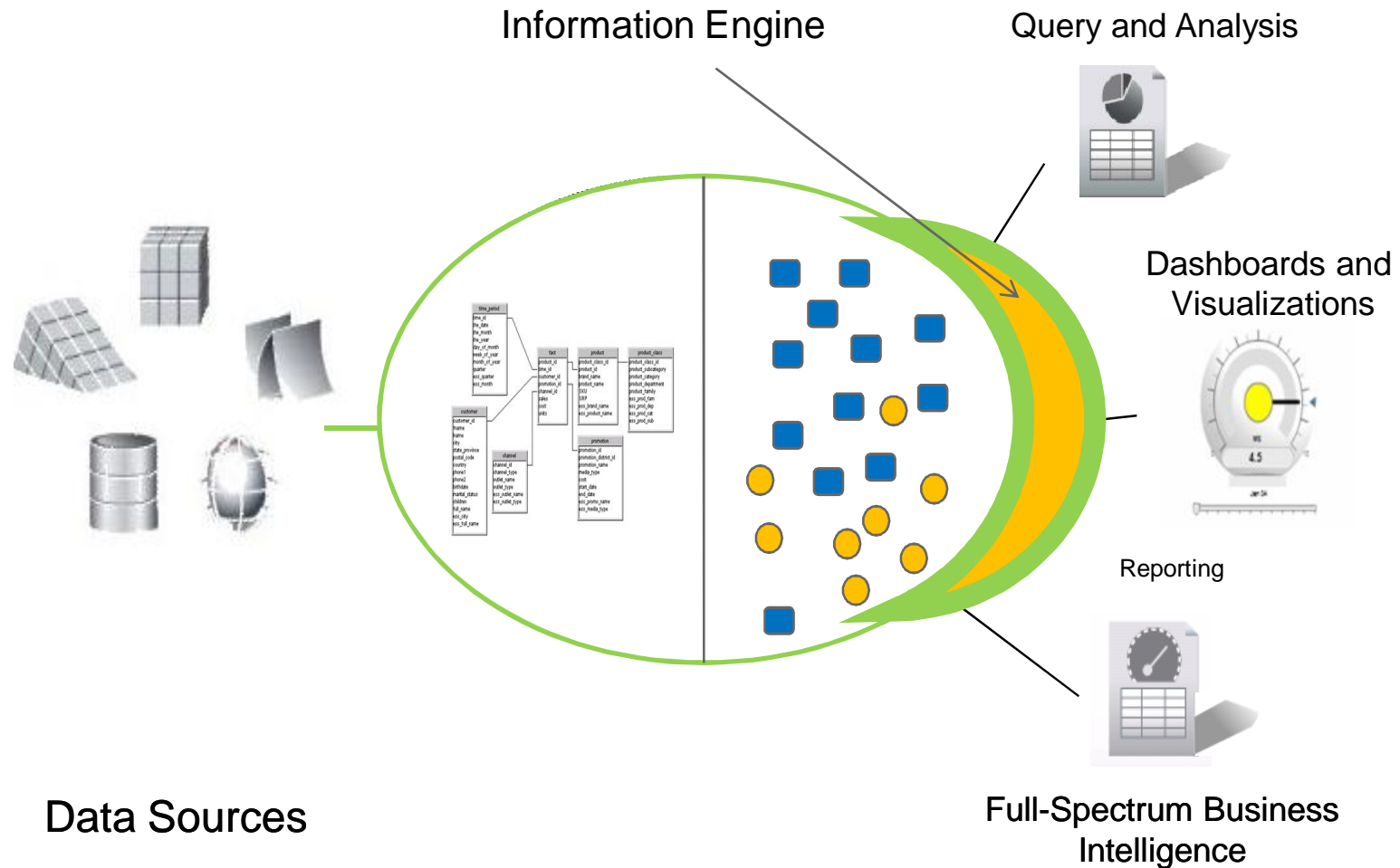
The Semantic Layer components



The Semantic Layer components



The Semantic Layer components



Drag-&-Drop SQL Query Generation Patented Technology



Need to report the *Revenue* by *Resort* in every *Country*?

The screenshot shows the SAP Business Intelligence Web Intelligence Document editor. The interface is divided into several panes:

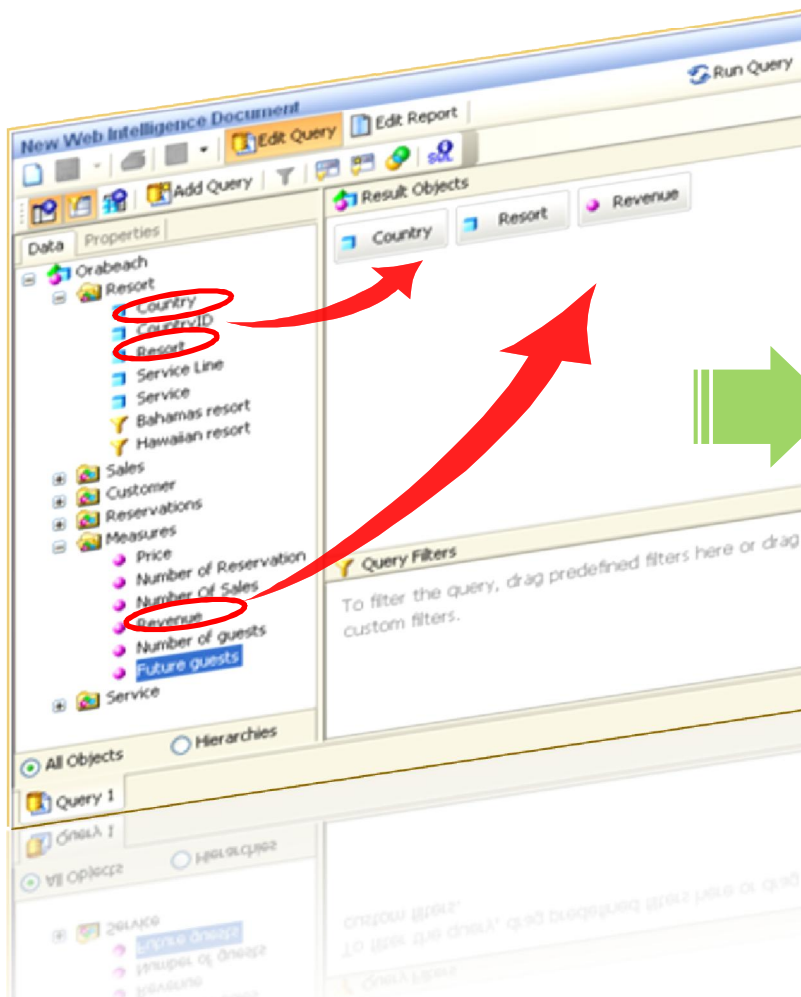
- Data:** A tree view showing the data source hierarchy. Under 'Orabeach', there is a 'Resort' folder containing 'Country', 'CountryID', 'Resort', 'Service Line', and 'Service'. Below this are 'Bahamas resort' and 'Hawaiian resort'. Other folders include 'Sales', 'Customer', 'Reservations', 'Measures', and 'Service'. The 'Measures' folder contains 'Price', 'Number of Reservations', 'Number of Sales', 'Revenue', 'number of guests', and 'Future guests'. The 'Revenue' measure is circled in red.
- Result Objects:** A pane showing the objects selected for the query. It contains three buttons: 'Country', 'Resort', and 'Revenue'. Red arrows point from the 'Country' and 'Revenue' buttons in this pane to their respective items in the 'Data' pane.
- Query Filters:** A pane for defining filters. It contains the text: "To filter the query, drag predefined filters here or drag objects define custom filters."

At the bottom of the window, there are radio buttons for 'All Objects' (selected) and 'Hierarchies', and a tab labeled 'Query 1'.

Drag-&-Drop SQL Query Generation Patented Technology



Need to report the *Revenue* by *Resort* in every *Country*?



```
SELECT
  RESORT_COUNTRY.COUNTRY ,
  RESORT.RESORT ,
  sum( INVOICE_LINE.DAYS *
  INVOICE_LINE.NB_GUESTS * SERVICE.PRICE )
FROM
  INVOICE_LINE INNER JOIN SERVICE ON
  ( INVOICE_LINE.SERVICE_ID=SERVICE.SERVICE
  _ID)
  INNER JOIN SERVICE_LINE ON
  ( SERVICE.SL_ID=SERVICE_LINE.SL_ID)
  INNER JOIN RESORT ON
  ( SERVICE_LINE.RESORT_ID=RESORT.RESORT_ID
  )
  INNER JOIN COUNTRY  RESORT_COUNTRY ON
  ( RESORT.COUNTRY_ID=RESORT_COUNTRY.COUNTR
  Y_ID)
GROUP BY
  RESORT_COUNTRY.COUNTRY ,
  RESORT.RESORT
```

Semantic Layer

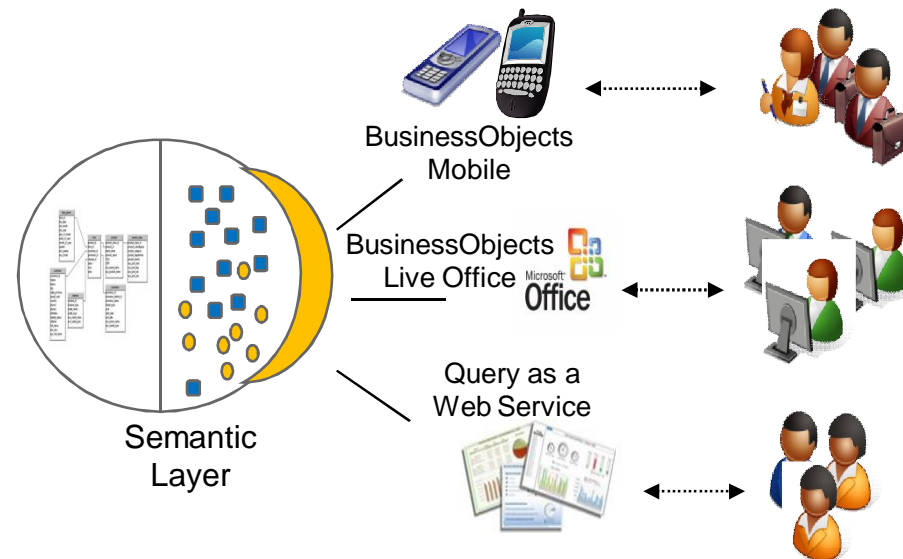
Open Access to Any client and user



Extend BI to new business audiences by reusing the semantic layer metadata

Access the semantic layer and the underlying data

- From any BI platform tool
 - BusinessObjects Mobile
 - BusinessObjects Live Office
 - BusinessObjects Polestar
 - Crystal Reports,
 - Web Intelligence
 - Xcelsius
- From any web enabled application—Query as a Web Service
 - Deliver secure BI in any application
 - Enable machine-to-machine access to live data
 - Deliver BI to users in their environment
 - Only expose the BI needed by users



Semantic Layer

Access any data type

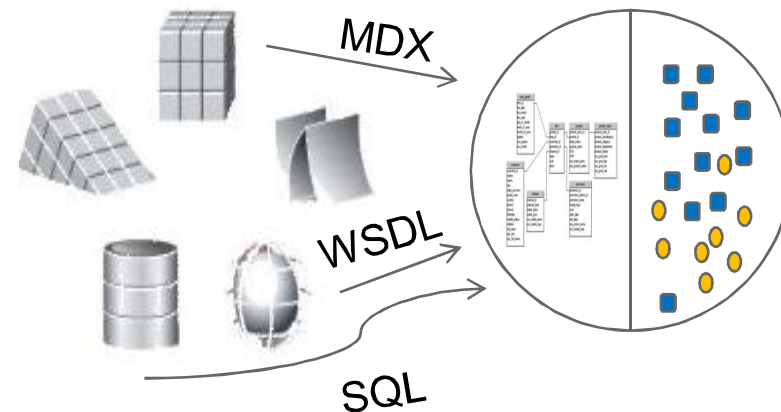


Universes make it easy to access, analyze and enrich all data in your organization regardless of the underlying source

Universes do not impose a data warehousing strategy, vendor, a schema, a way to store your data

Universes provide native access to

- OLAP sources
- Relational sources
- XML and web services
- JavaBean



Combine with Data Federation for more Agility

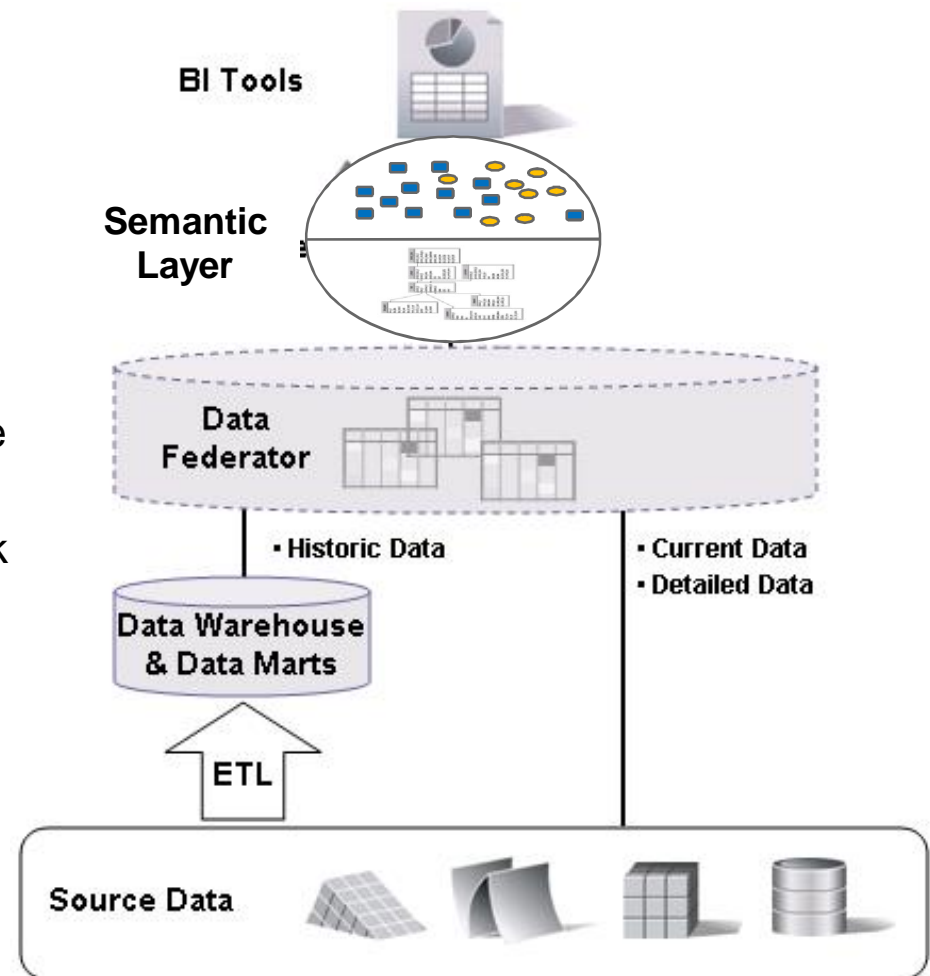


Enterprise Information Integration (EII) or data federation is:

- Agile and rapid data integration
- On-demand access to data
- Real-time delivery of information
- **Multi-source access to SAP NW BI (Q1'09)**

Data Federator offers:

- Easy, reliable, and real-time access to disparate data—regardless of data structure and location
- Non invasive technology—no need to write back to production systems
- Deep integration and compatibility with the BI platform
- Flexibility and optimized performance
- Seamless connectivity to an ever-increasing list of databases and data sources
- The most advanced query optimizer available in the market today



CONCLUSIONS



Semantic Layer the foundation for Business Intelligence

1. Agile

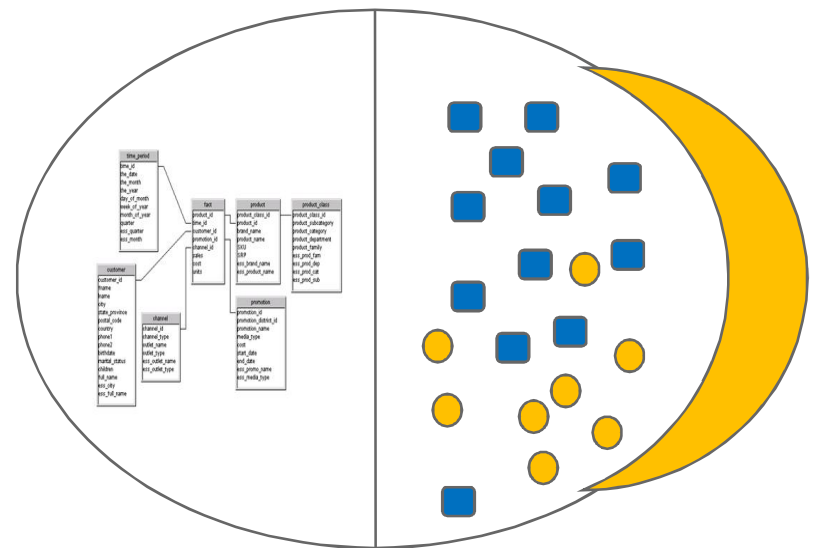
- Any source, any schema, no data transformation needed
- Multi-source combining SAP and non SAP data
- Universes on OLAP data sources allow a larger number of users with different profiles to query, report, and analyze on OLAP data sources
- Lower TCO and faster ROI

2. Consistent access

- Single User Experience over all data
- All Business Objects clients
- Open to any application via Web Services

3. Trusted

- Reliable
- Secured
- Reusable



Further Information



→ SAP Public Web:

BusinessObjects Enterprise Portal:

www.sdn.sap.com/irj/boc/businessobjects-enterprise

SAP Developer Network (SDN): www.sdn.sap.com

Business Process Expert (BPX) Community: www.bpx.sap.com

BusinessObjects Semantic Layer forum:

<https://forums.sdn.sap.com/forum.jspa?forumID=308>

→ Related SAP Education and Certification Opportunities

<http://www.sap.com/education/>

Thank you!