

# Service Oriented Business Intelligence

(Master in Innovation and Research in Informatics  
&  
Erasmus Mundus IT4BI)

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# Introduction

# Knowledge objectives

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1. Define a service
2. Explain the potential benefits and risks of using services in general and specifically in BI
3. List some criteria to choose a service provider
4. Identify the three possible combinations of services and BI
5. Place the three combinations of services and BI in the services lifecycle

# Service definition

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“Services are economic activities offered by one party to another, most commonly employing time-based performances to bring about desired results in recipients themselves or in objects or other assets for which purchasers have responsibility. In exchange for their money, time and effort, service customers expect to obtain value from access to goods, labor, professional skills, facilities, networks, and systems; but they do not normally take ownership of any of the physical elements involved.”

Lovelock & Wright

# Unified services theory

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“All managerial themes unique to services are founded in customers providing significant inputs into the production process.”

Sampson

# Benefits of outsourcing

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- Focus on its core competence
- Decreases cost
- Access to latest technology
  - Without investment
- Leverages benefits from a supplier
  - Economies of scale

# Risks of outsourcing

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- ❑ Loss of direct control over quality
- ❑ Exposure to data security issues
- ❑ Dependence on one supplier
- ❑ Coordination expense and delays
- ❑ Atrophy of in-house capacity

# Criteria to choose provider

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- Convenience
  - Locality issues
- Dependability
  - Reliability
- Personalization
- Price
- Quality
  - Expectations vs perception
- Reputation
- Speed
- Security
  - Confidentiality
  - Availability



## Activity

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- *Objective: Understand some specificities of using cloud services in BI*
- *Tasks:*
  1. (3') *Read separately the corresponding document*
  2. (10') *Share knowledge*
  3. *Hand in two lists of pros and cons of Cloud-BI*
  4. (5') *Class sharing*
- *Roles for the team-mates during task 2:*
  - a) *Explains his/her material*
  - b) *Asks for clarification of blur concepts*
  - c) *Mediates and **controls time***

# Two components

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## Services

"SOA is a term that represents a model in which automation logic is decomposed into smaller, distinct units of logic."

Thomas Erl, 2011

## Business Intelligence

"The ability to apprehend the interrelationships of presented facts in such a way as to guide action toward a desired goal."

Hans Peter Luhn, 1958

# Possible compositions

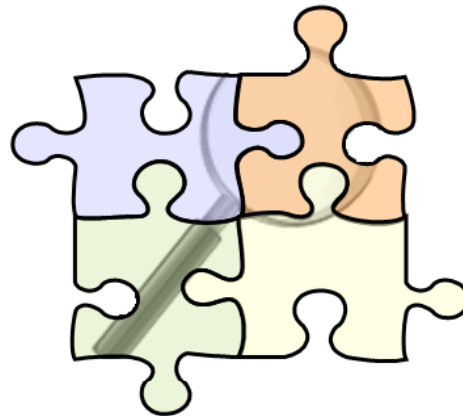
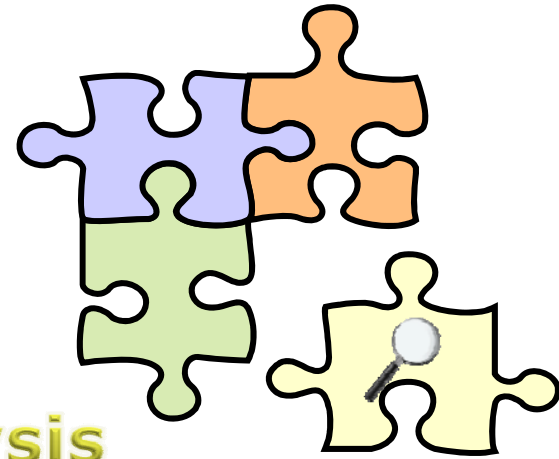
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1-Analysis of Services

2-Analysis as a Service

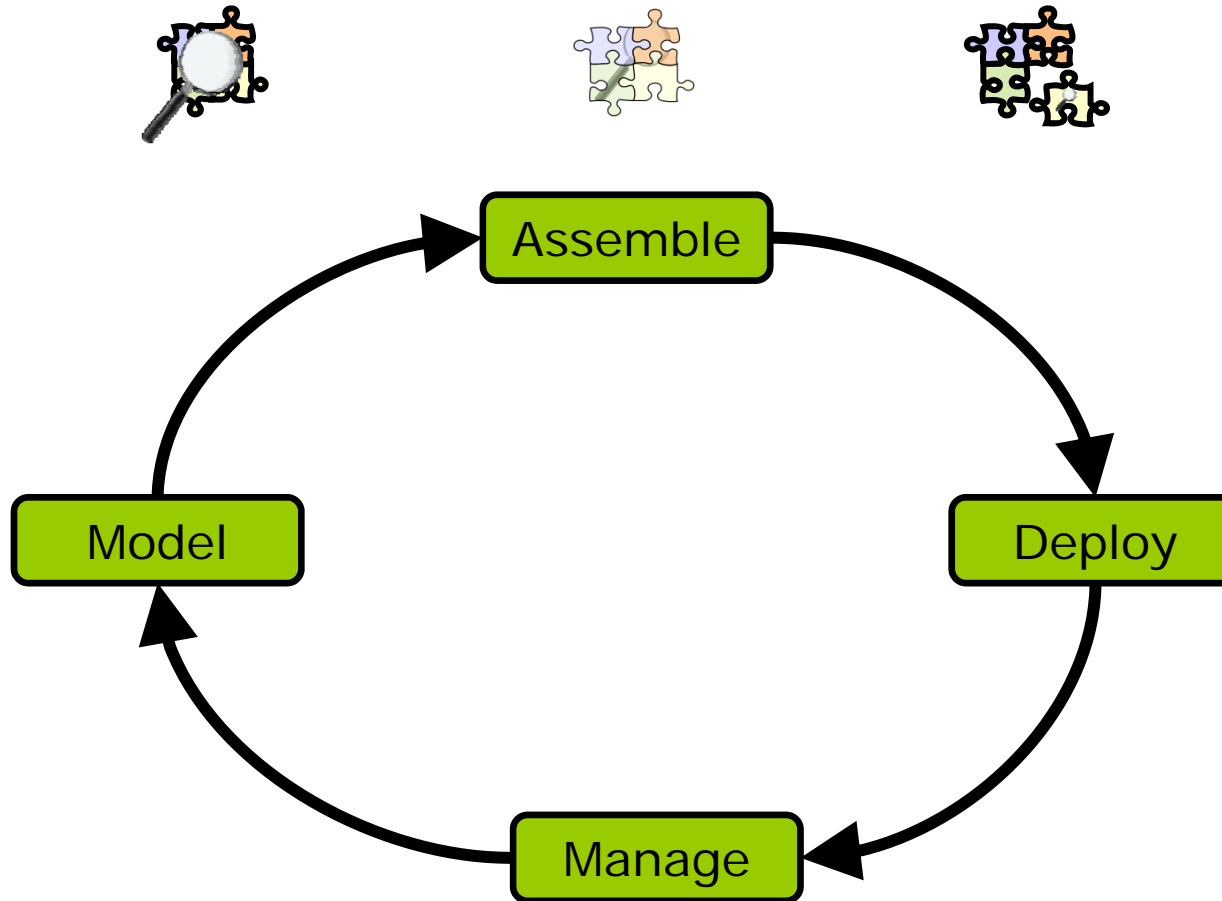


3-SOA for Analysis

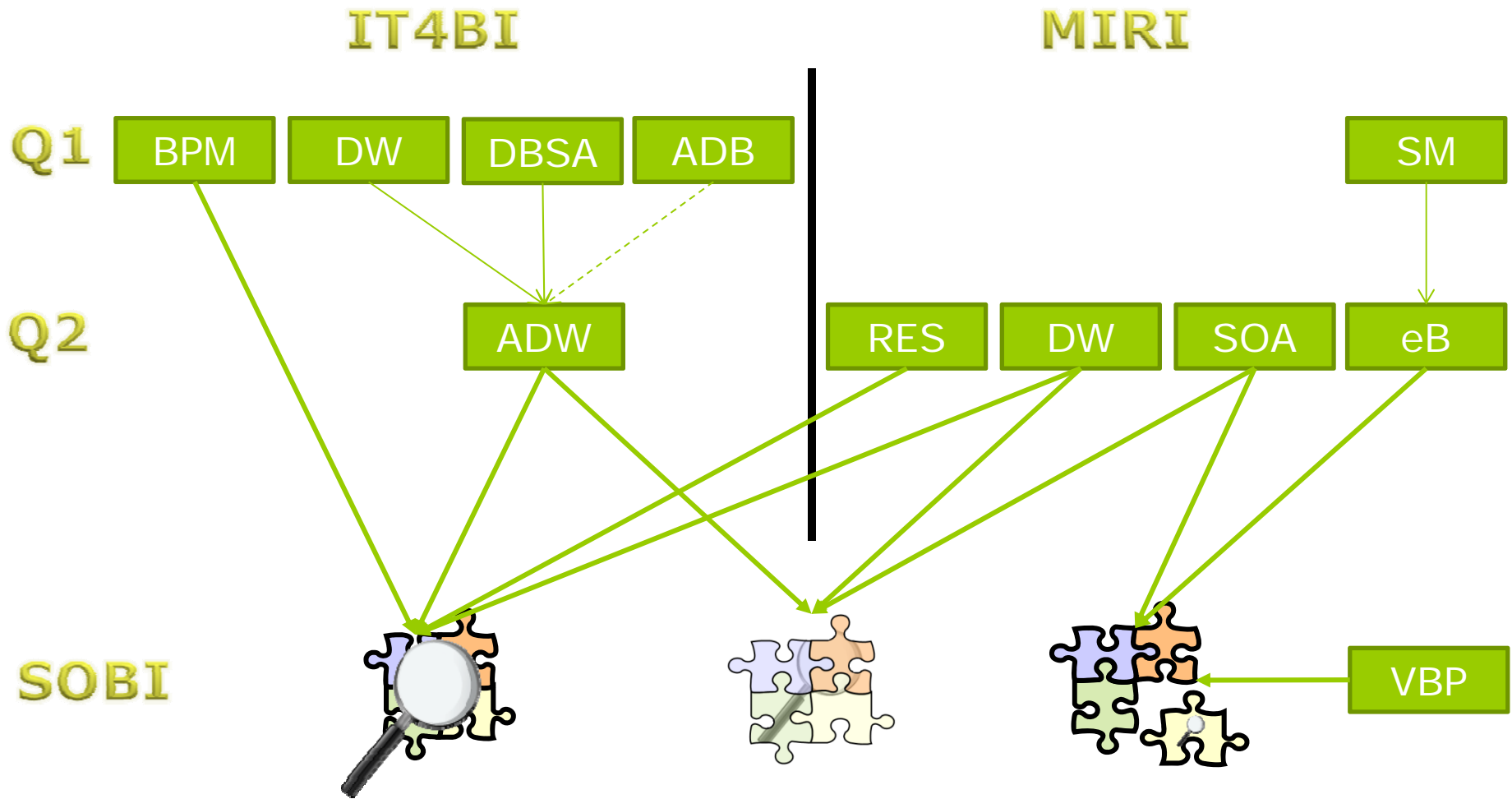


# Service Oriented Architecture lifecycle

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# Students background



# Summary

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- ❑ Service definition
- ❑ Outsourcing benefits and risks
- ❑ Criteria to choose a provider
- ❑ Combinations of services and BI

# Bibliography

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- C. Lovelock, L. Wright. *Services Marketing: People, Technology, Strategy*, 6<sup>th</sup> edn. Prentice-Hall, 2007
- S. E. Sampson. *Understanding Service Businesses: Applying Principles of Unified Services Theory*, 2<sup>nd</sup> edn. John Wiley&Sons, 2001
- J. Tien, D. Berg. *A case for service systems engineering*. *Journal of Systems Science and Systems Engineering* 12(1), 2003