Service Oriented Business Intelligence

Knowledge objectives

1. Explain need for BIaaS
2. Explain characteristics of BIaaS
3. Distinguish between BIaaS and BI using services
4. Enumerate the four layers of cloud services
5. Distinguish the four layers of cloud services
6. Explain how tools at each of the four layers can help to provide BI

The needs of organizations

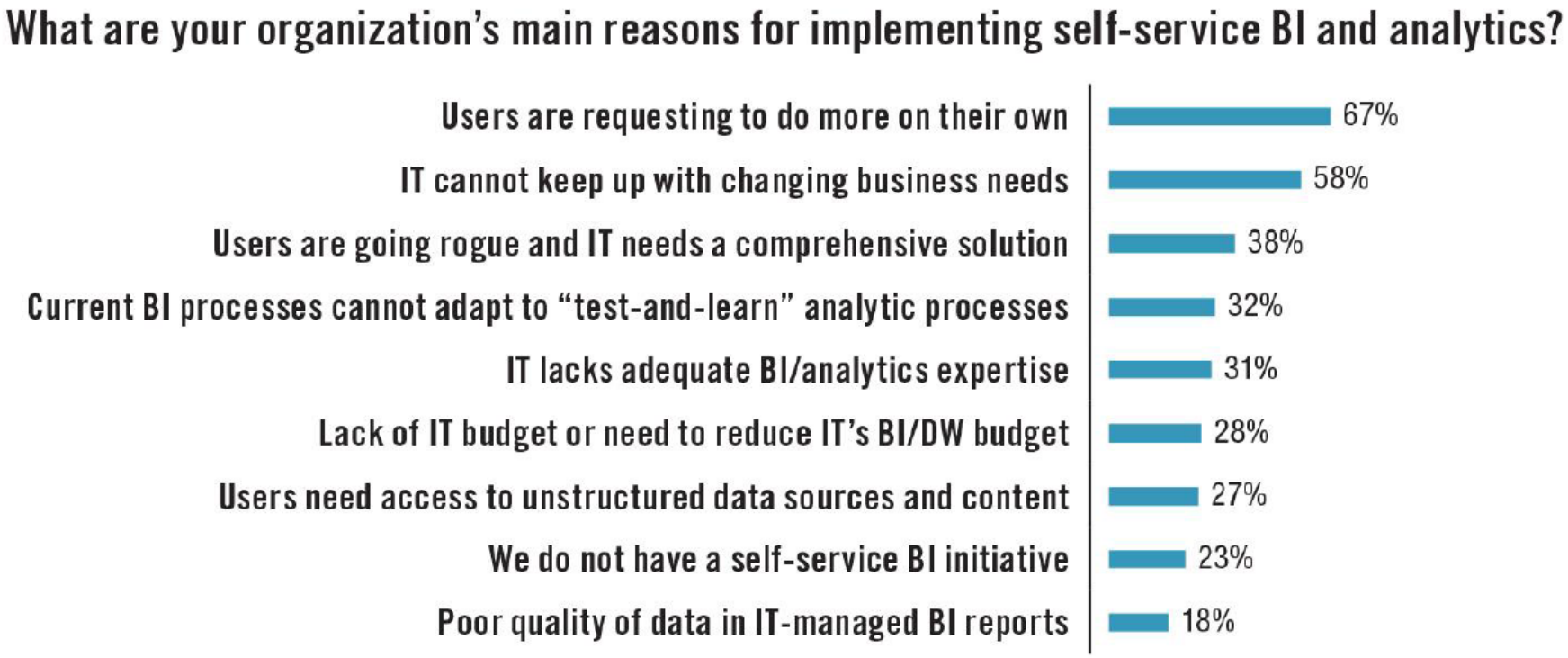
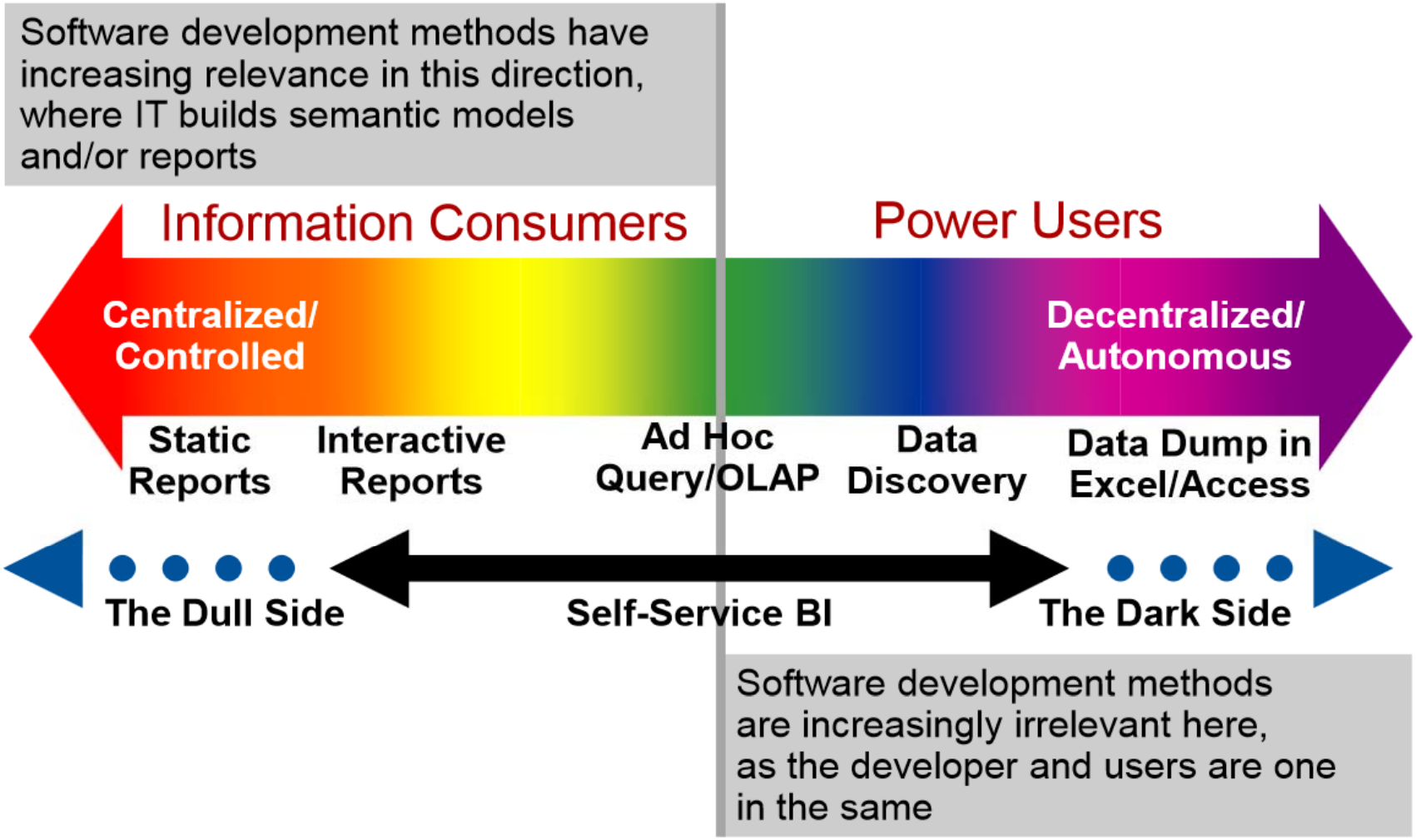


Figure 3. *Based on answers from 377 respondents; respondents could select more than one answer.*

TDWI Best Practices Report, "Achieving Greater Agility with Business Intelligence," First Quarter 2013

The right sweet spot for BI



Gartner

New trends

- Self-Service reporting strategy
  - Remove the IT bottleneck from BI
- Semantic layer based BI platforms
  - Provide data discovery
- Organizational model
  - Agility and strong governance

Self-service BI

- Definition

  "Enabling the business user community to create their own reports and analyses from scratch."

  R. Kimball

- Requirements
  - Multidimensional model
  - User support
    - Documentation
    - Metadata
    - Training
    - Assistance
    - Standard reports
  - Analysis tools

BI 2.0

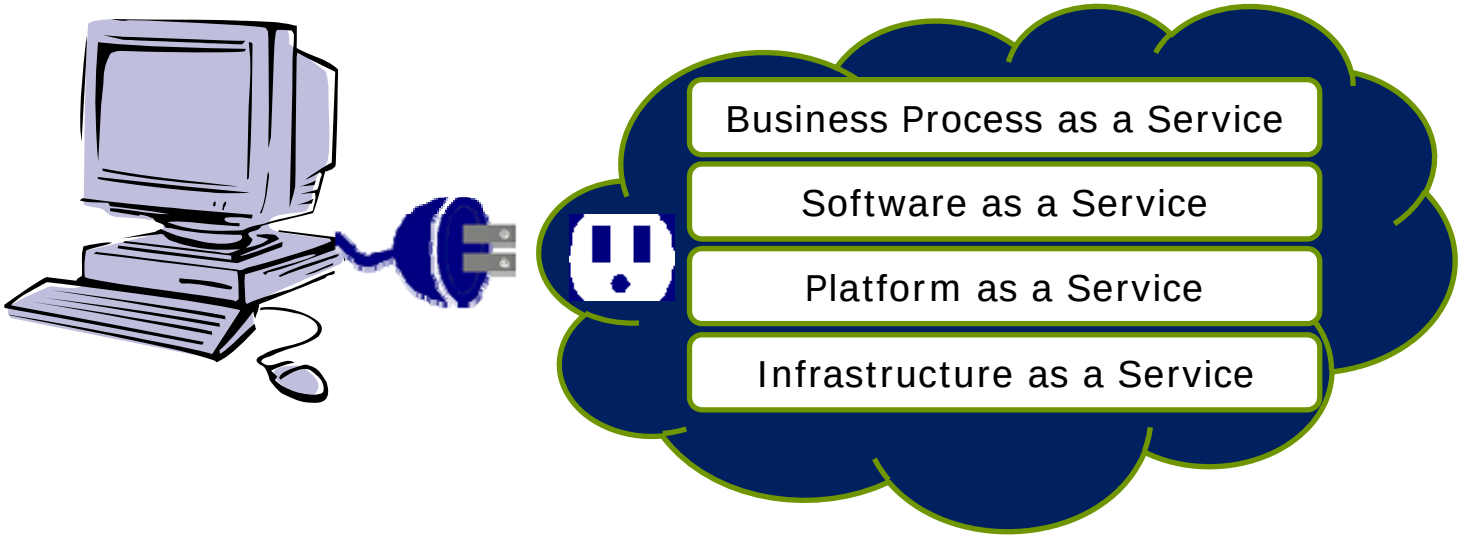
- Simplicity
- Universal access
- Real-time insight
- Collaboration
- Operational intelligence
- Connected services
- Agility and speed of analysis

Neil Raden, Information Week

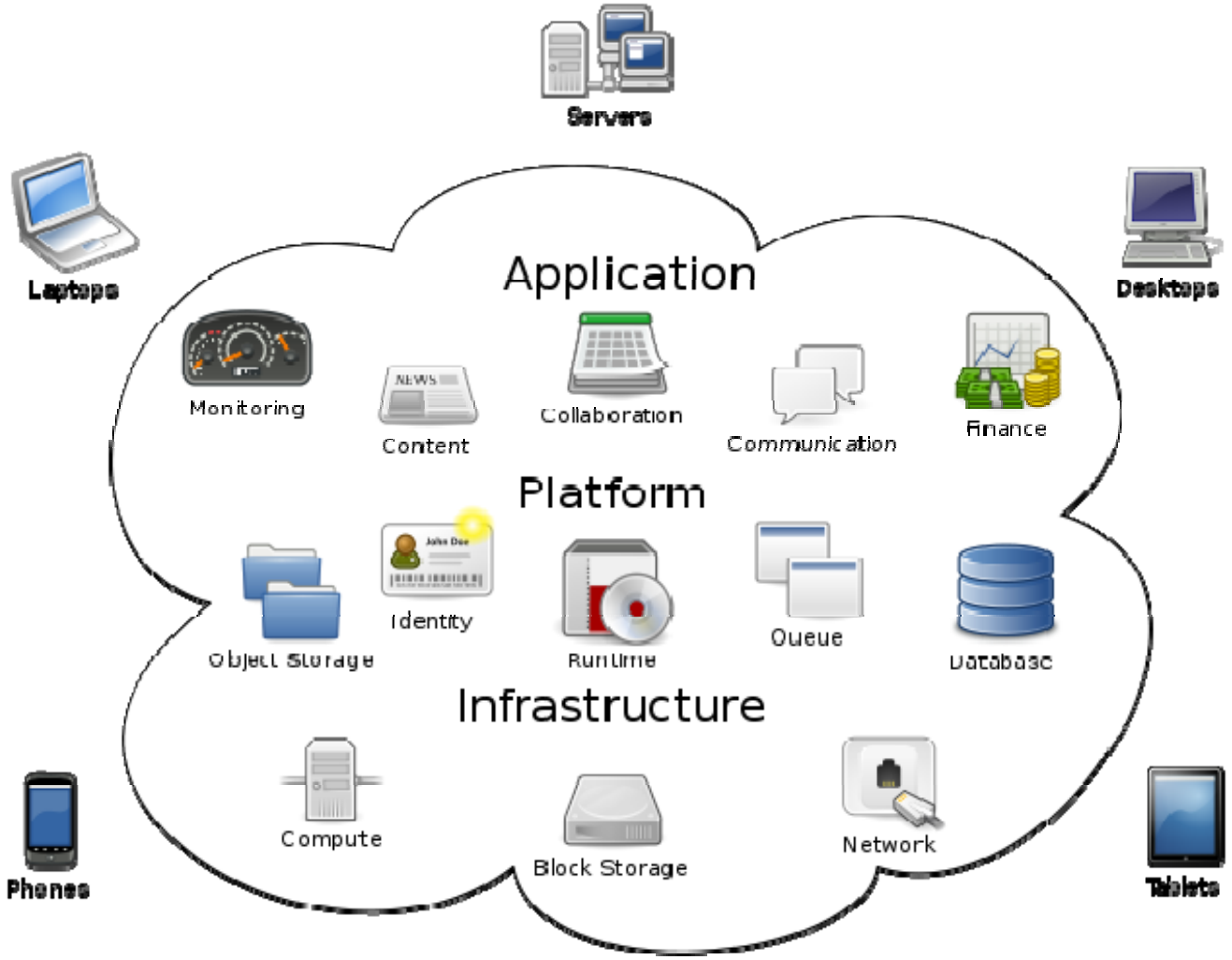
BI as a Service

- Enable users to build their own reports
- Enable users to build their own analytical views
- Use data discovery functionalities
- Promote consistency of KPI
- Certify content (for distribution)
- Blend IT and business skills
- Balance central and de-central BI delivery

Service layers

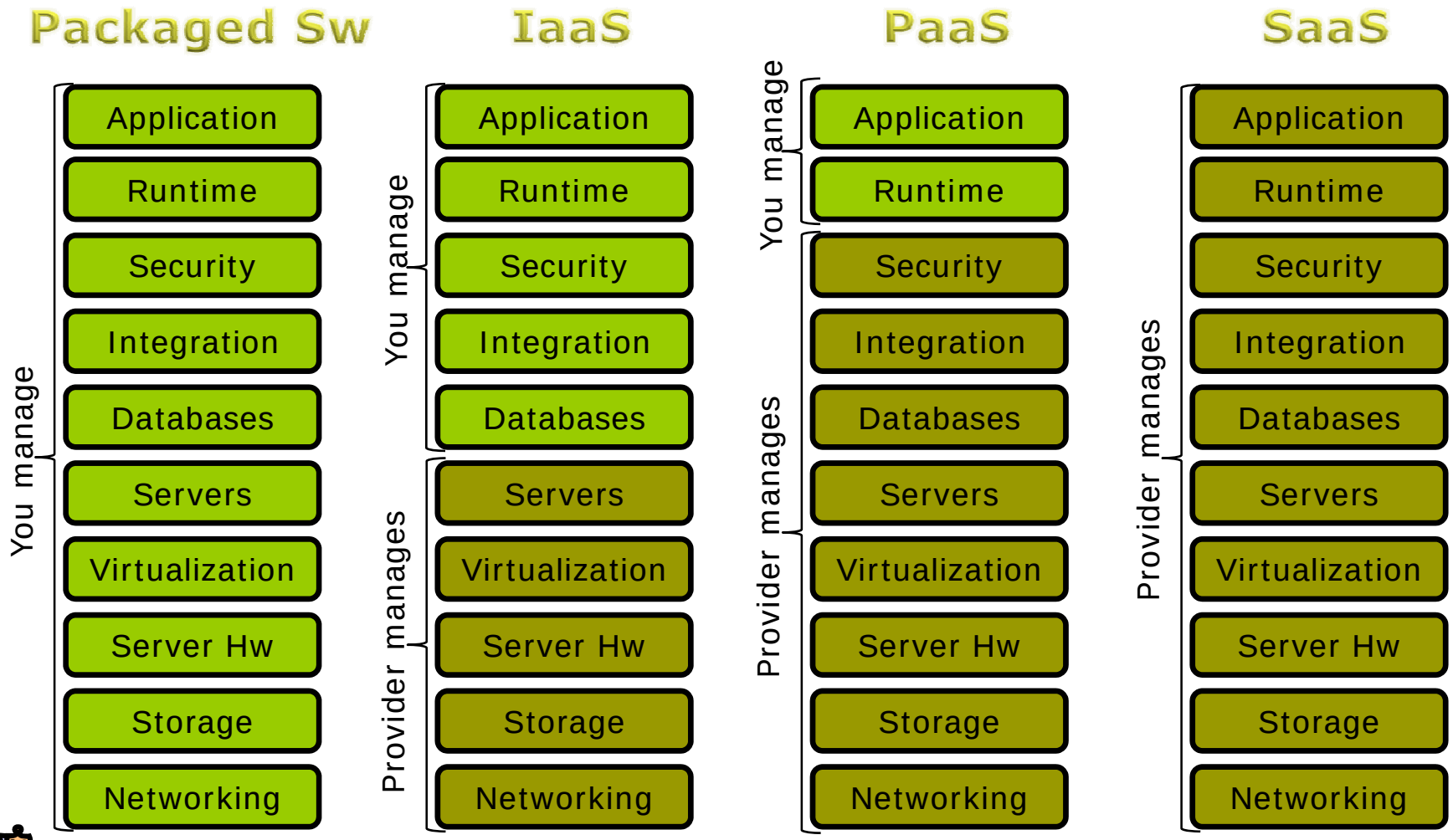


Examples per layer

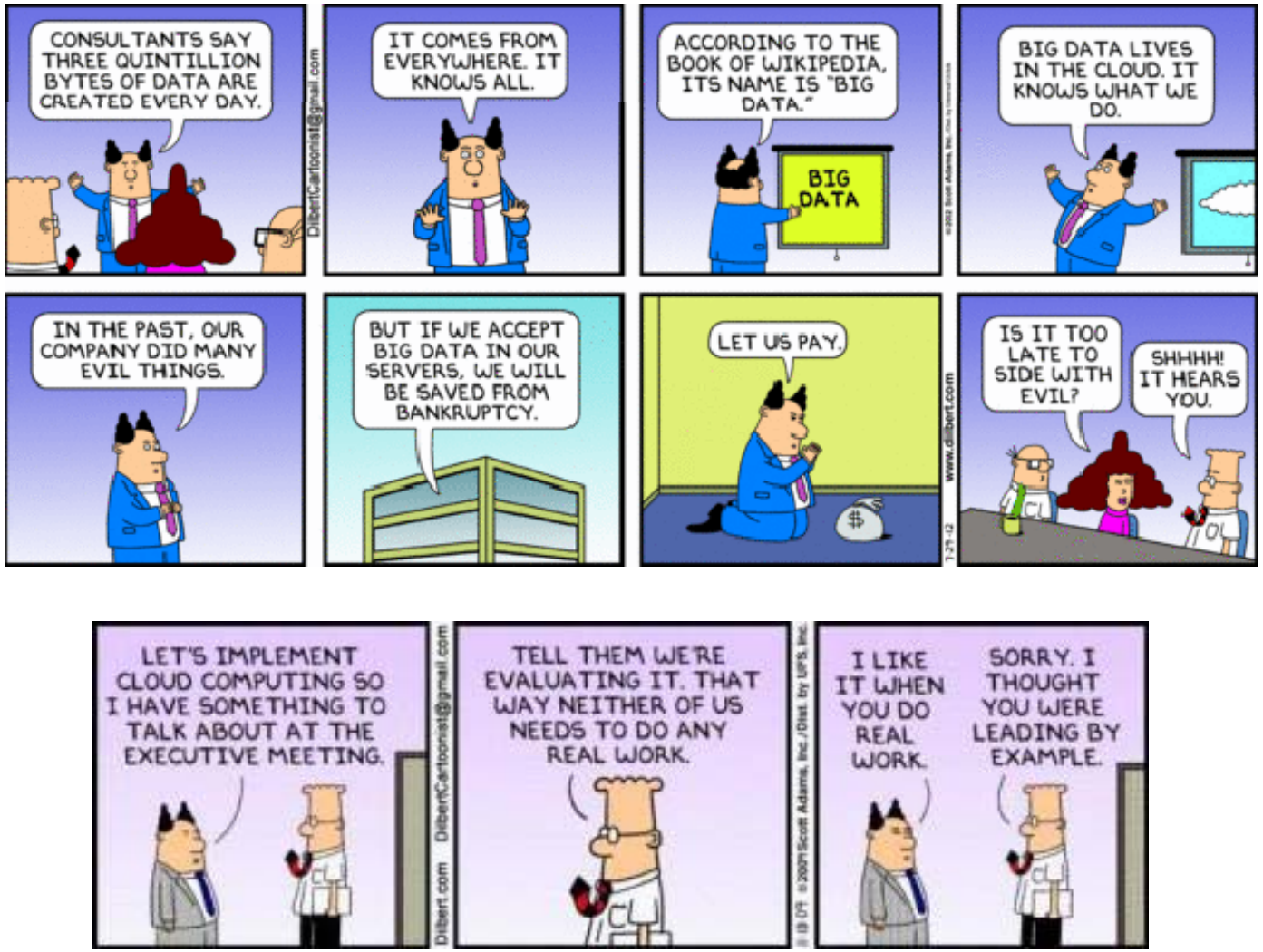


Picture by Alberto Prieto

Responsibility



Relationship between Cloud and BI



Activity

- Objective: Understand the stack of services
- Tasks:
  1. (10') Read separately the corresponding document
  2. (35') Share knowledge
  3. Hand in a summary of each layer with something original
  4. (15') 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***

Infrastructure as a Service

- Amazon EC2
- IBM SmartCloud
- Google app engine
- Etc.

Platform as a Service

- Google BigTable
- Amazon SimpleDB
- Microsoft SDS
- FanthomDB
- Aster DB
- Vertica
- K2 Analytics
- etc.

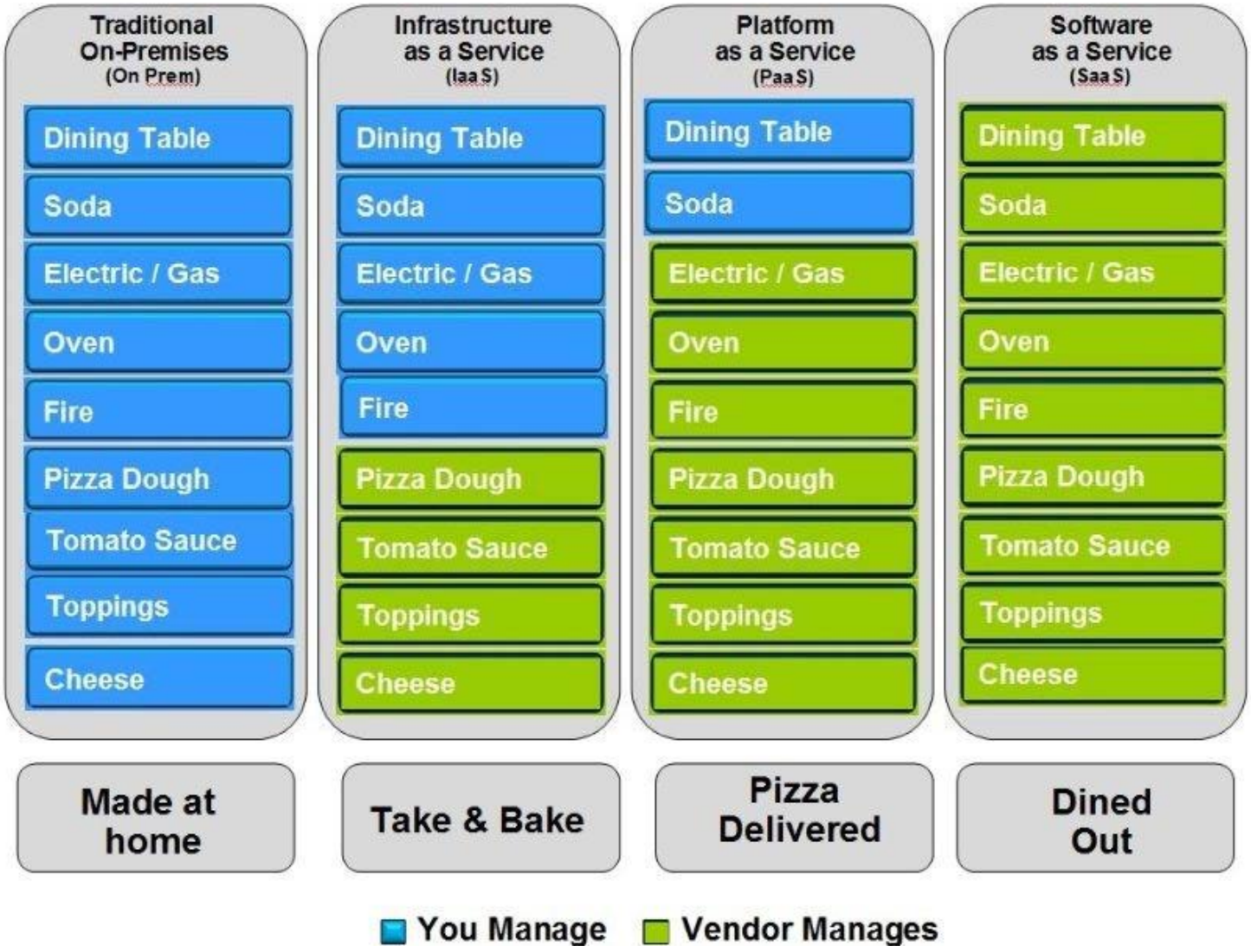
Software as a Service

- Salesforce.com
- Cloud9
- Oco
- RightNow
- Microstrategy
- Quantivo
- Oracle on Demand
- etc.

Business Process as a Service

- IBM WebSphere
- Oracle SOA suite
- webMethods
- Apache ServiceMix
- Microsoft Connected Services Framework
- Open ESB
- etc.

Pizza as a Service



Virtualization analysis

- Benefits in the provider
  - Resource usage
  - Management
  - Consolidation
  - Energy consumption
  - Less space required
  - Emergency planning
- Benefits in the consumer
  - Dynamic behavior
  - Availability
  - Access
- Drawbacks
  - Operation of the virtualization layer consumes resources
  - More systems need to be managed

Summary

- BIaaS
- Stack of cloud services
  - IaaS
  - PaaS
  - SaaS
  - BaaS

Bibliography

- Gartner Reports. G00232650, G00175593, and G00219131
- A. Abelló, and O. Romero. *Service-Oriented Business Intelligence.* In Lecture Notes in Business Information Processing Volume 96. Springer, 2012.