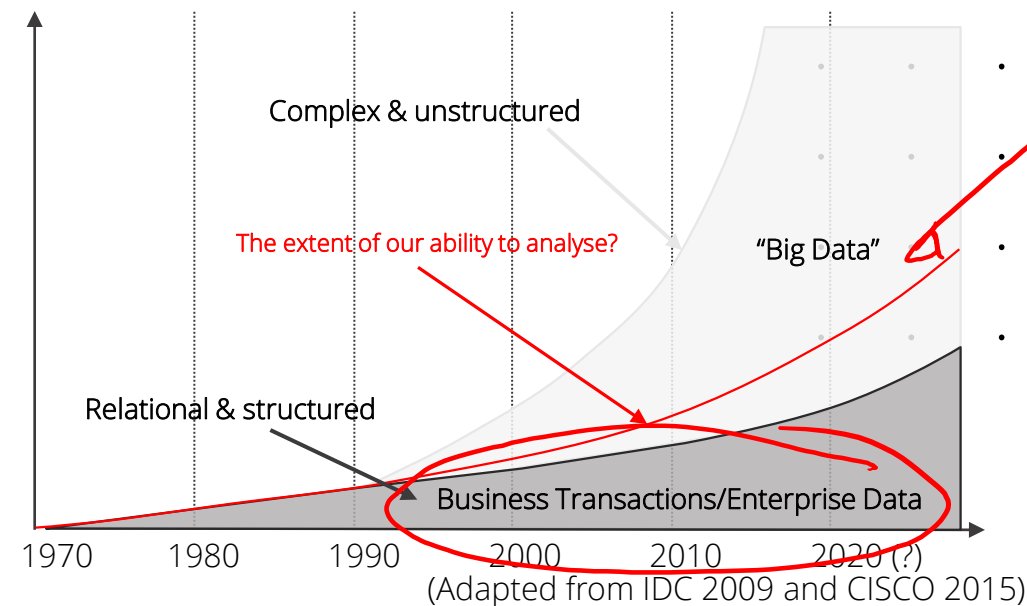
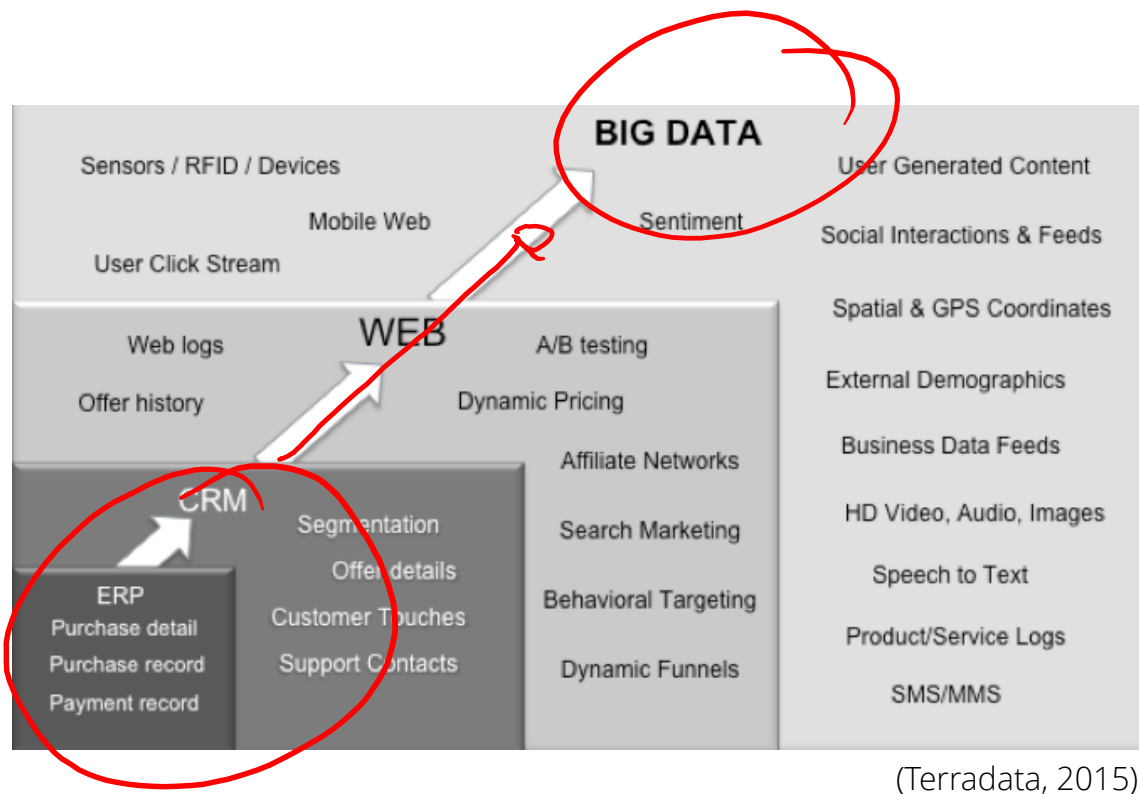


BDM Architecture & Infrastructure

Adi Prananto

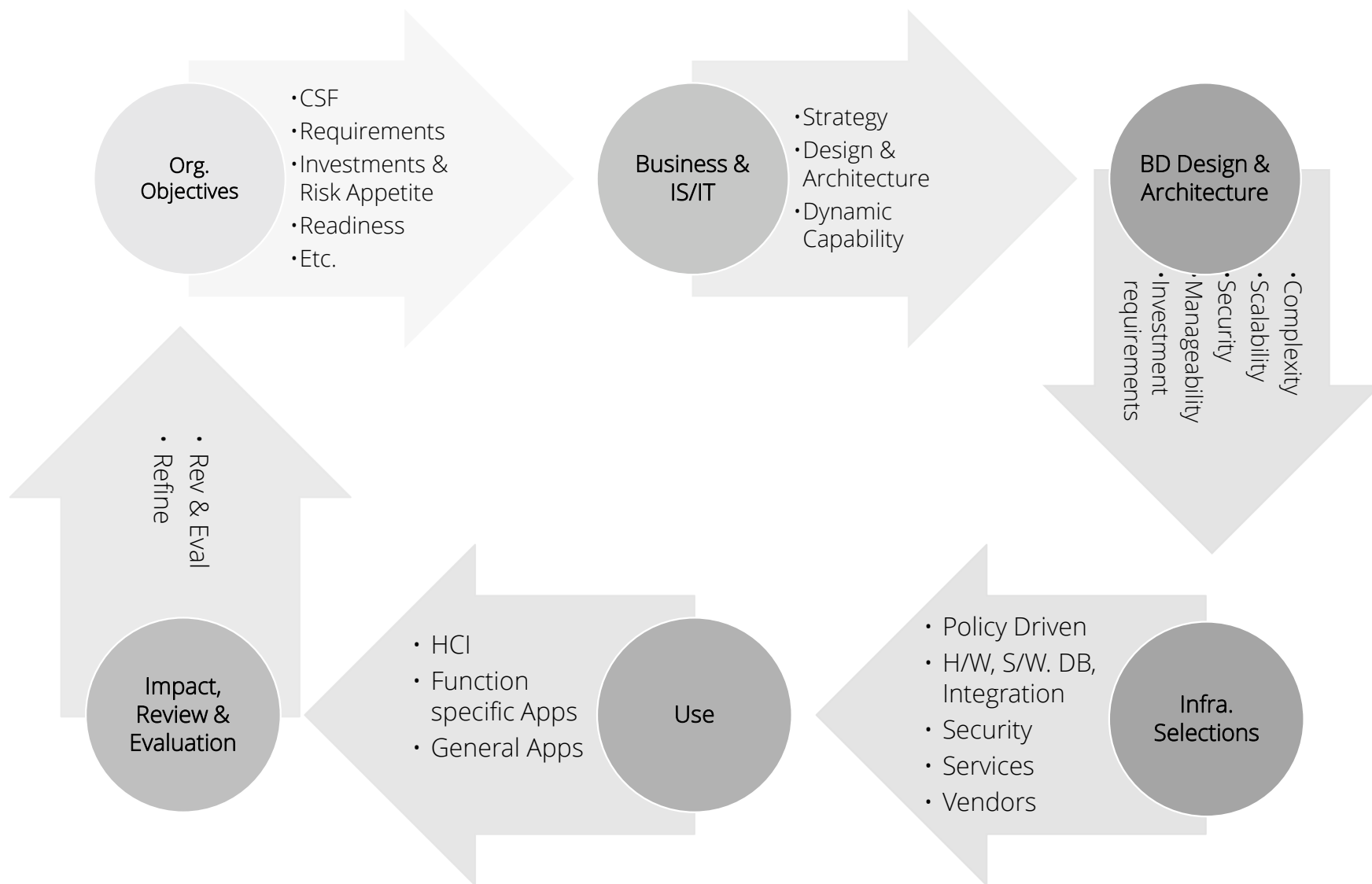


Phenomena vs Organisational Intent

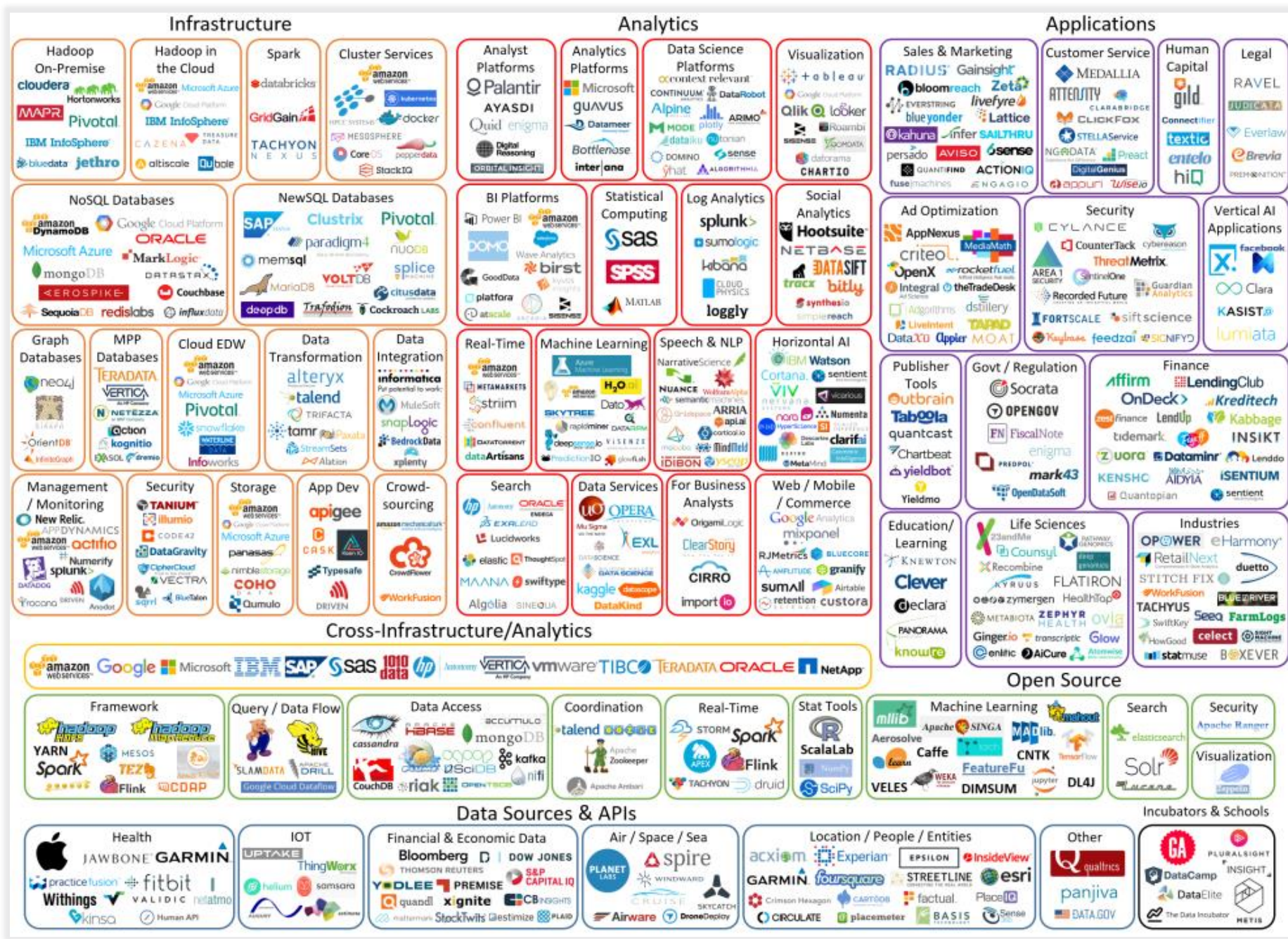


How **THE** **WHY** What
Who **Where**

From Organisational Objectives to Apps

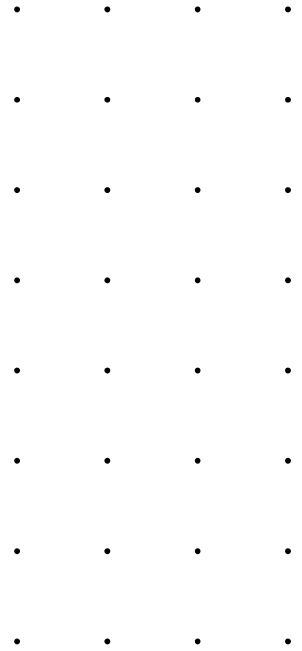
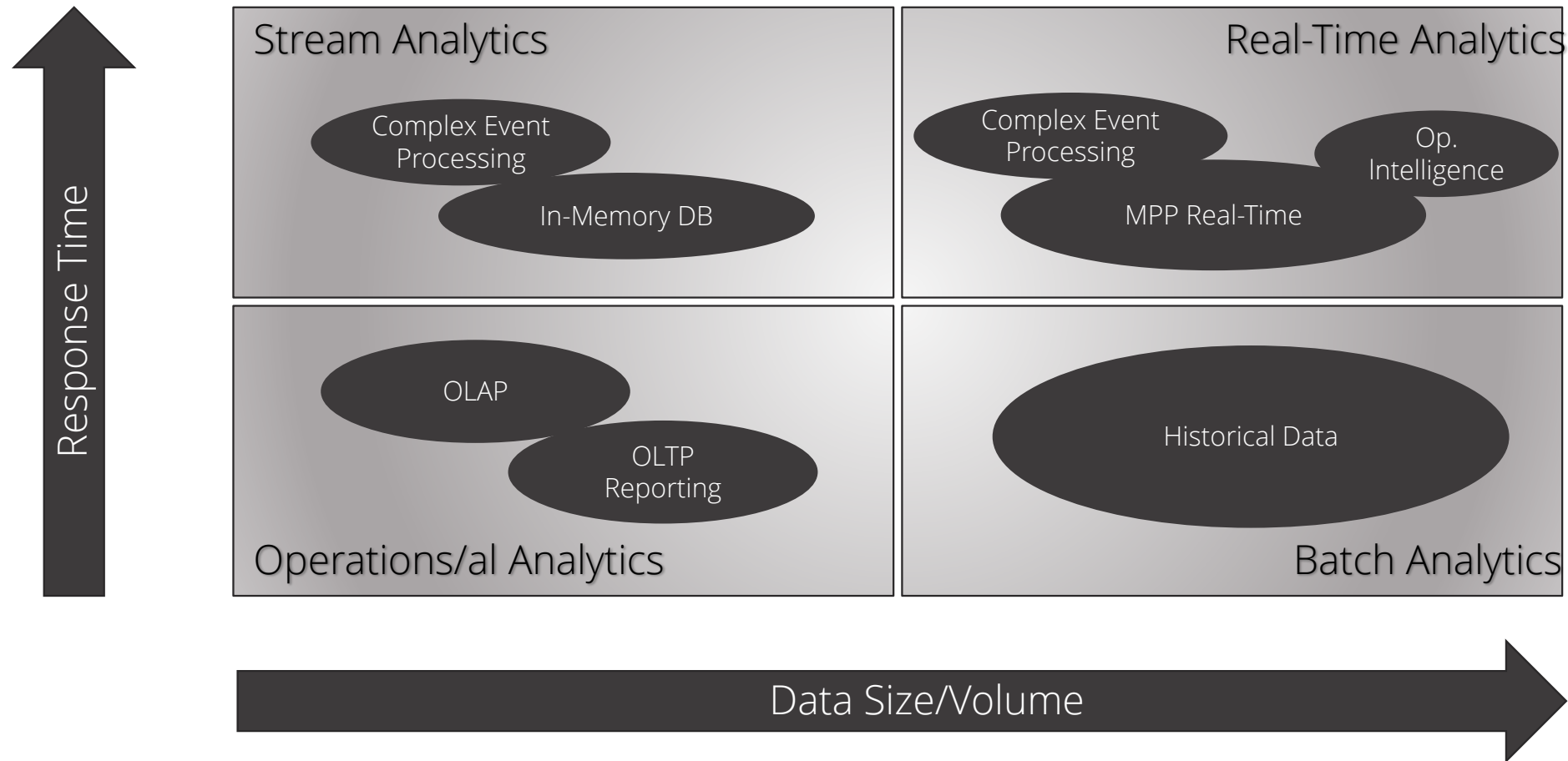


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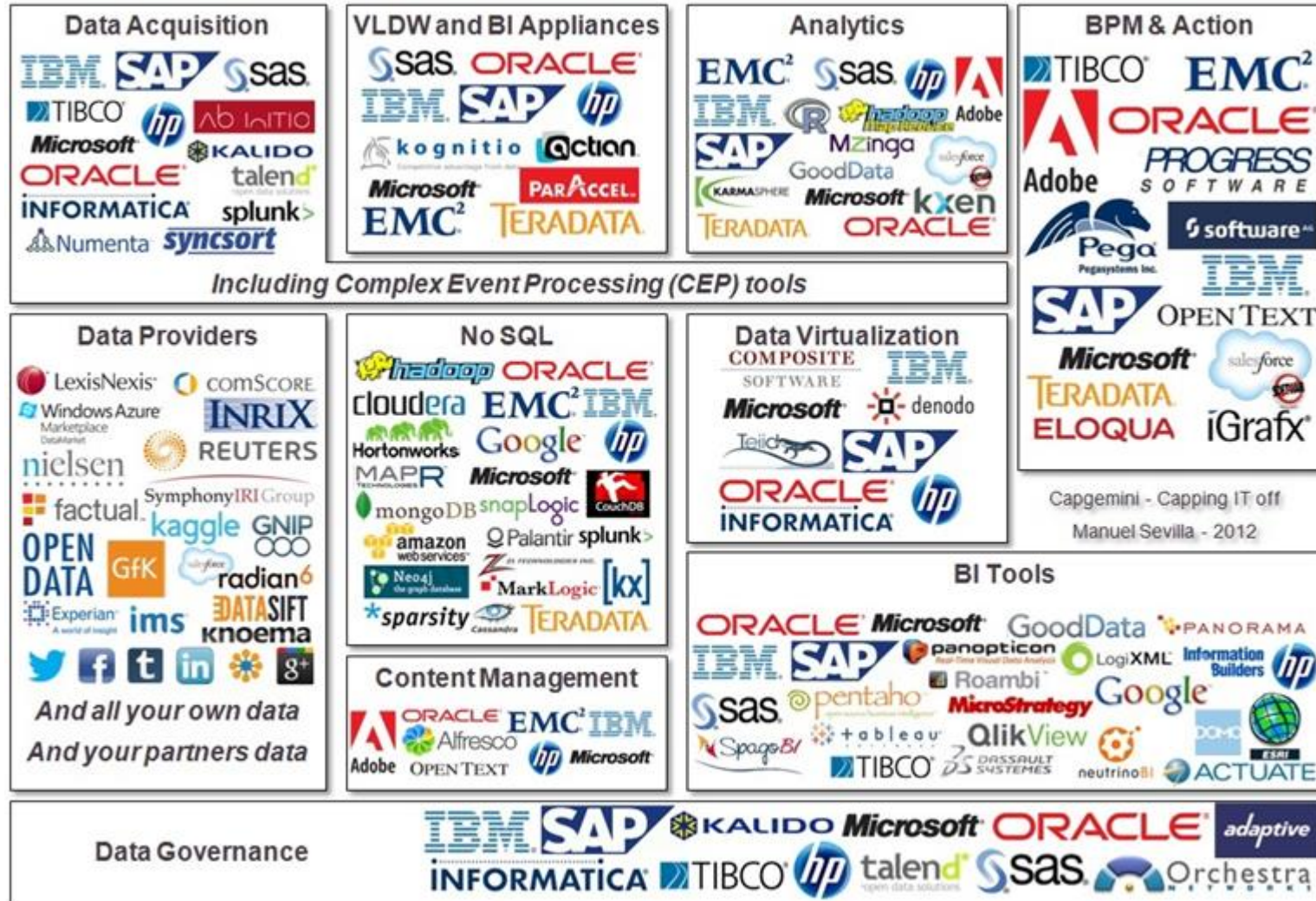
Moving into Big Data Analytics

Considerations for Business Use-Case



(Adapted from CISCO 2015)

(Parts of the) Platforms to be Considered



A thorough consideration for:

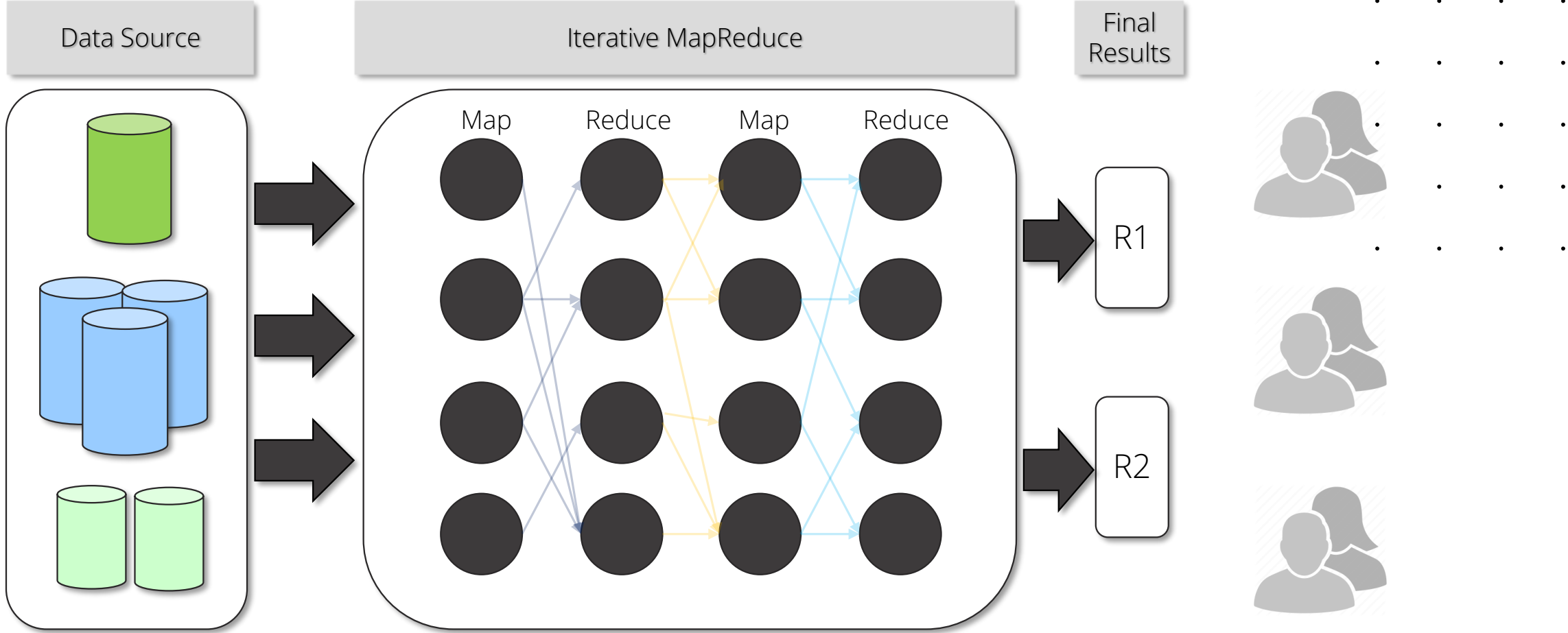
- Data Acquisition
- Data Warehouse
- Analytics
- Process Management
- Data source/providers
- Suitable DB types
- Data Governance

A 10x4 grid of dots. There are 10 rows and 4 columns of dots. Each row contains 4 dots, and each column contains 10 dots. The dots are arranged in a regular grid pattern.



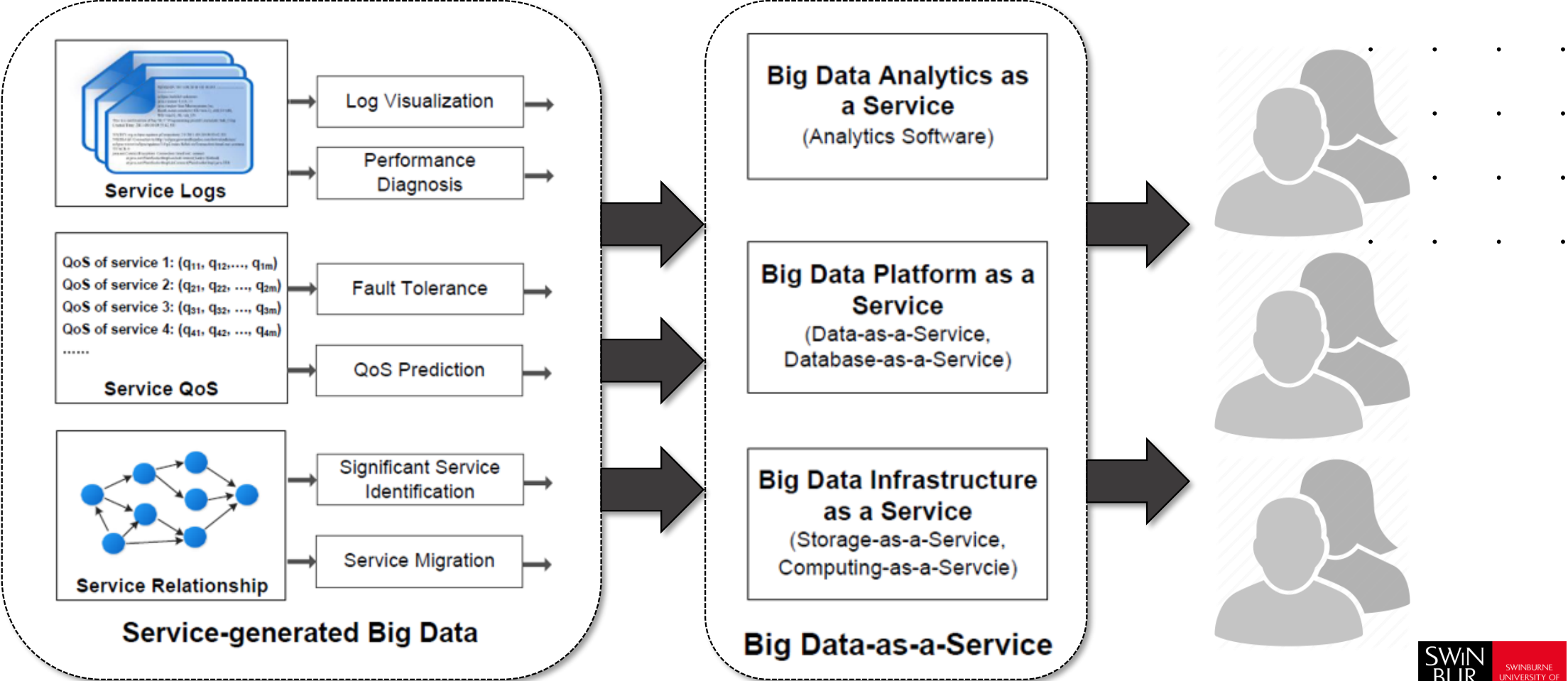
Slide #: 7

Understanding the Data Analytics Architecture



(Adapted from Fox 2015; Hadoop.apache.org; Garion, 2015)

Big Data-as-a-Service



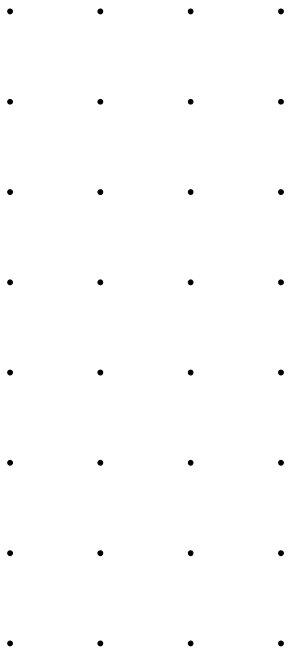
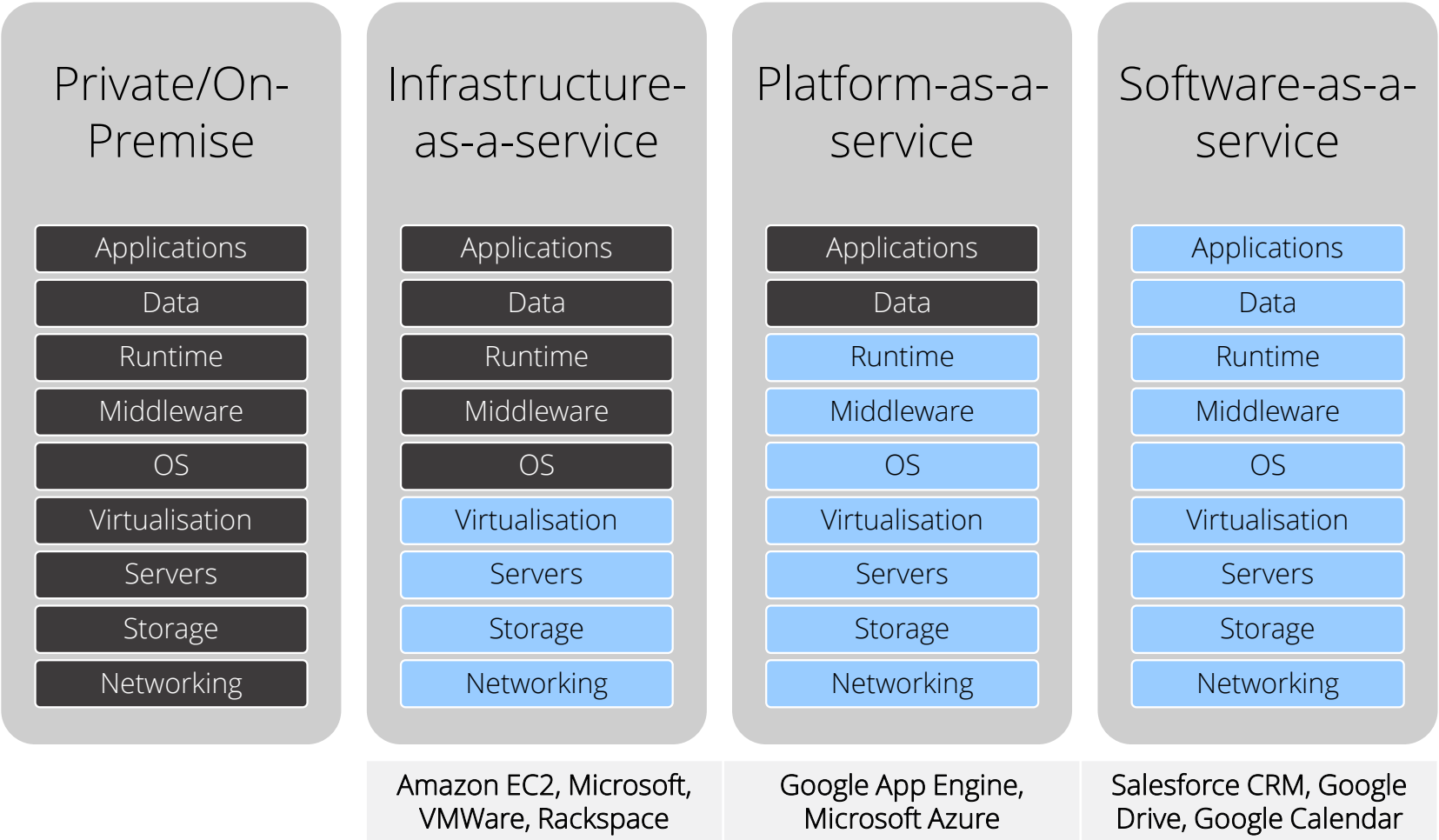
(Zhen, Zhu, and Lyu 2013)

Cloud as an Extended Infrastructure

Public	Private	Hybrid
<ul style="list-style-type: none">• Relatively easy to set up• Relatively “convenient” as the key infrastructure complexity has been dealt with by the provider• Scalability if/when required• “Contract-based” arrangement• Improved security features	<ul style="list-style-type: none">• Greater controls over features and elements of the infrastructure• Cost generally greater (i.e., significant Capex)• Generally requires specific in-house IS/IT skill/knowledge-set• Security is relative to the ability of the organisation’s IS/IT Security & Risk Management to secure the infrastructure	<ul style="list-style-type: none">• A mix model between public & private• Inherits many of the strength and concerns of public & private• Integration of processes, workflow, technology, and data is essential

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Cloud Service Models



(Adapted from Terkaly & Villalobos 2013, IBM 2015)

Infrastructure Investments & Challenges



(From: Vanson Bourne, 2015)

Key Lessons Learned from Big Data Infrastructure Considerations

- Clear organisational objectives are required
- Alignment between Business strategy and IS/IT strategy
- Clarity in defining use, needs and requirement, expected impact
- Appropriate human & knowledge capitals in both business and technology are essentials
 - Know-how and understanding of alternative infrastructure & architecture model
- Readiness to Invest and Change
- Project management and Change management are important
- “Other” essential components: Security, Ethics, etc.