WEEK 3 COURSE HANDOUT

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MOORE'S LAW

Moore's Law

Gordon E Moore

Microprocessor Transistor Counts 1971-2011 & Moore's Law

curve shows transistor count doubling every two years
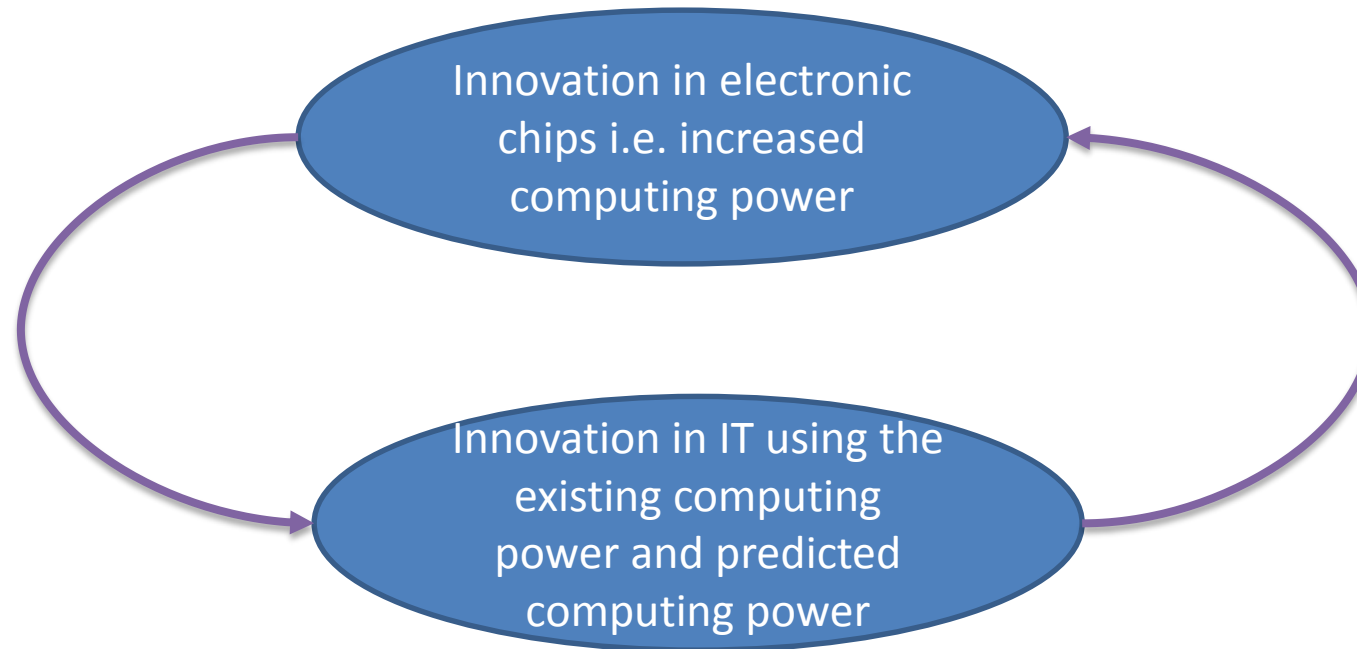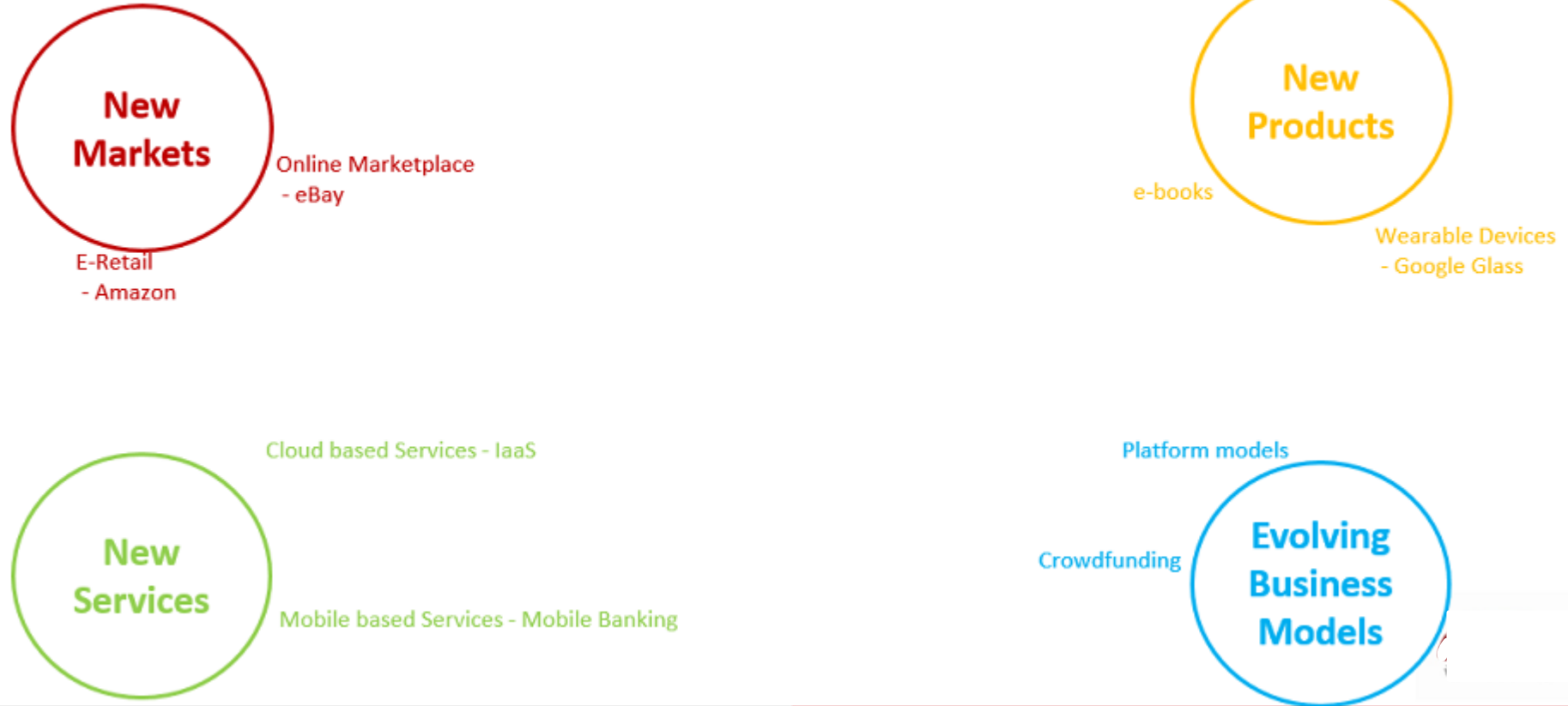
Innovations due to Moore's Law

Most of the innovation in the electronic chip industry has been driven by Moore's Law, making possible stupendous innovations in IT

Innovation in electronic chips i.e. increased computing power

Innovation in IT using the existing computing power and predicted computing power

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INNOVATING WITH IT

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Types of Innovations using IT

New Markets

Online Marketplace - eBay

E-Retail - Amazon

New Products

e-books

Wearable Devices - Google Glass

New Services

Cloud based Services - IaaS

Mobile based Services - Mobile Banking

Evolving Business Models

Platform models

Crowdfunding

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What is the importance?

Impact on the organisation?

Current level of adoption of this technology?

Platform and Network effects?

Vendor offerings?

Gaining attention?

Initial Stage

Evolving Stage

Hype or Real?

Managers Guide to Innovation

Successful implementations?

Evolved Stage

Mature Stage

Compelling success stories?

Growth of consultation practices?

Has it helped achieve business value?

Failed implementations?

EVOLVING IT

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CLOUD COMPUTING

Cloud Computing – Evolving stage of innovation

Resource Effective

Scalable

Cloud Computing

Cost Effective

Agile

Service Models
- IaaS
- PaaS
- SaaS

Deployment Models
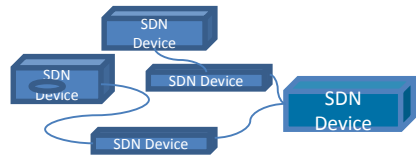- Public
- Private
- Hybrid
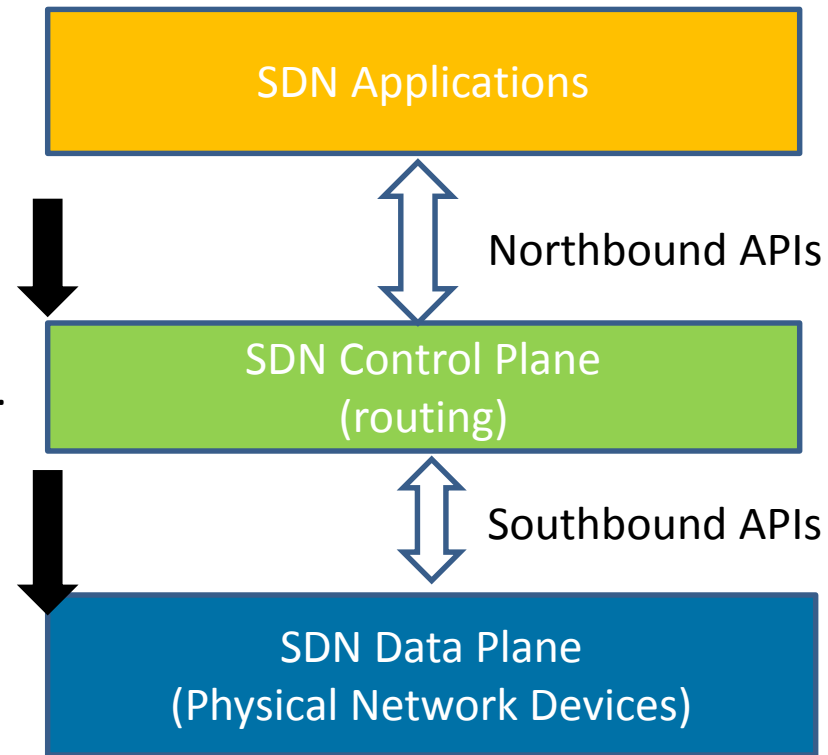- Community

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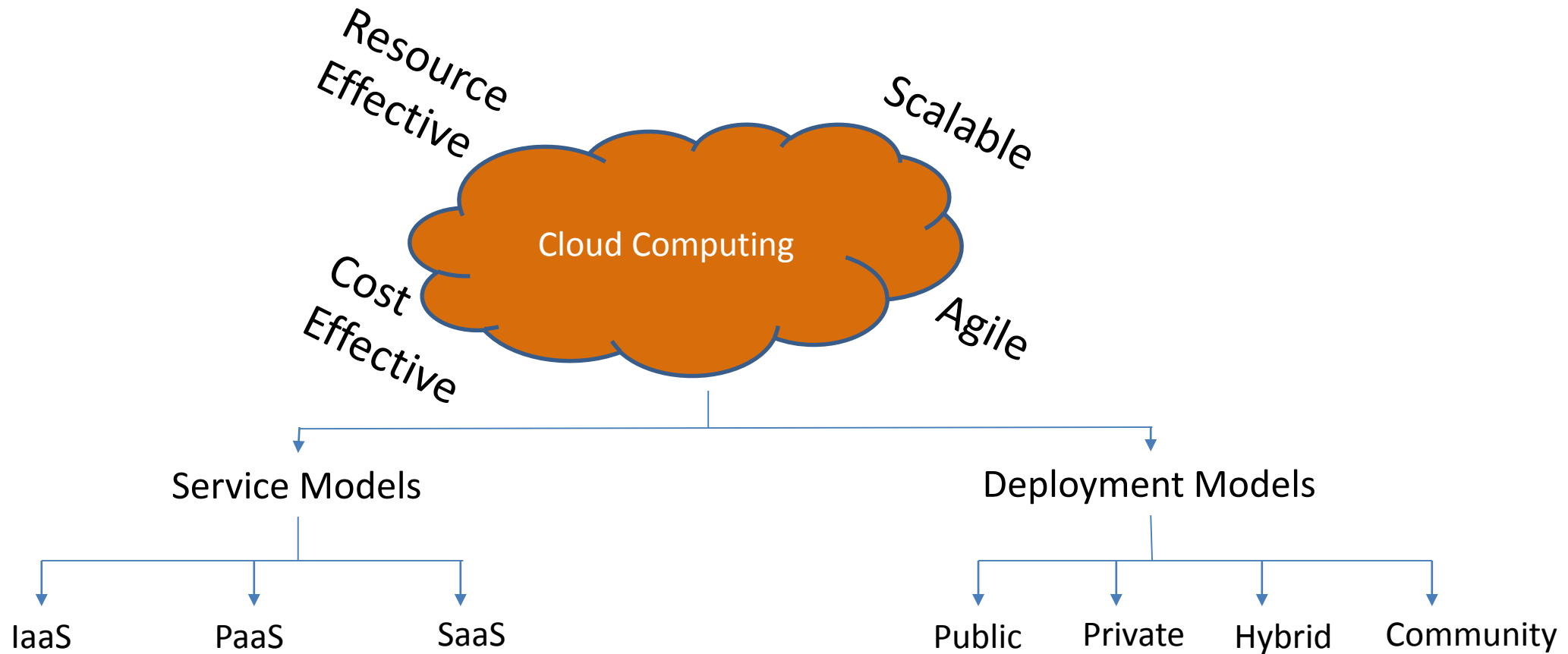
A bird's eye view of how SDN works

SDN applications send the network requirements

Control plane has a view of entire network topology, routing protocols needed & much more. It makes routing decisions. Can potentially assemble the SDN devices based on SDN application requirements & policies
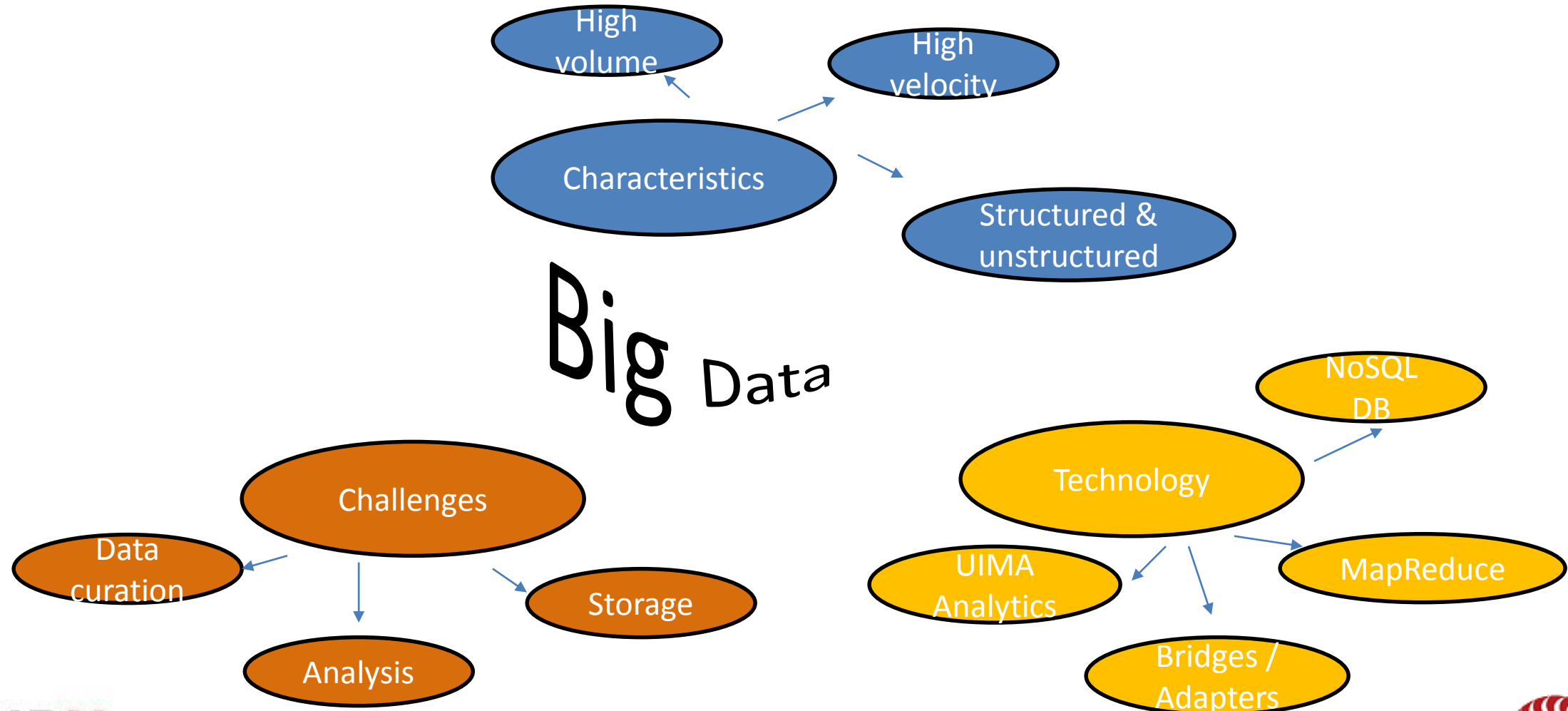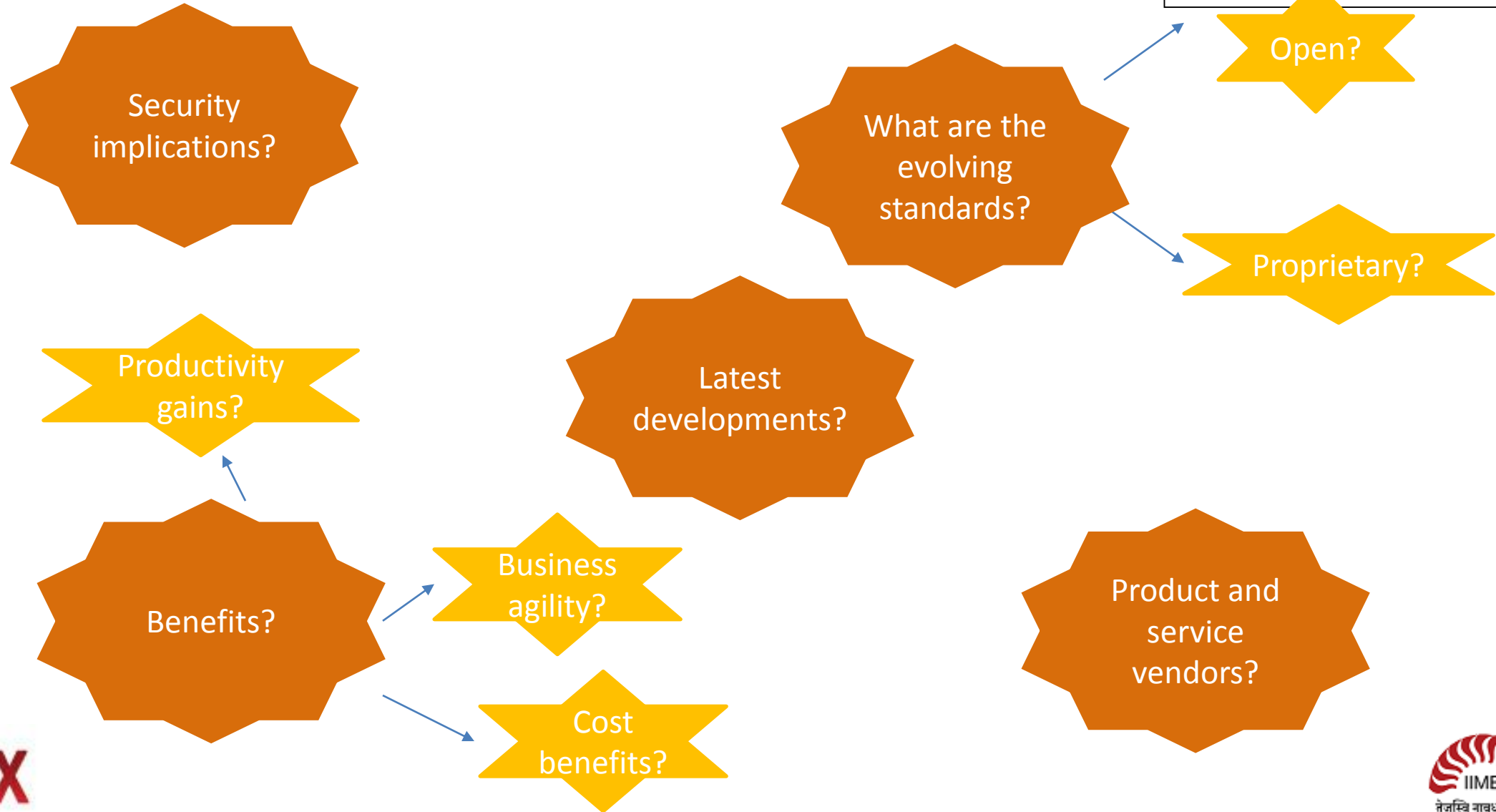
Data plane forwards the packets

SDN Applications

Northbound APIs

SDN Control Plane
(routing)

Southbound APIs

SDN Data Plane
(Physical Network Devices)

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BIG DATA

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Big data – Evolving stage of innovation

High volume

High velocity

Characteristics

Structured & unstructured

Big Data

NoSQL DB

Technology

Challenges

Data curation

UIMA Analytics

MapReduce

Storage

Bridges / Adapters

Analysis

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Important decisions to be made

Security implications?

What are the evolving standards?

Open?

Proprietary?

Productivity gains?

Latest developments?

Benefits?

Business agility?

Cost benefits?

Product and service vendors?

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DECISIONS TO BE MADE