

Applied Tech Systems Ltd



5 Critical Steps to becoming Industry 4.0 ready

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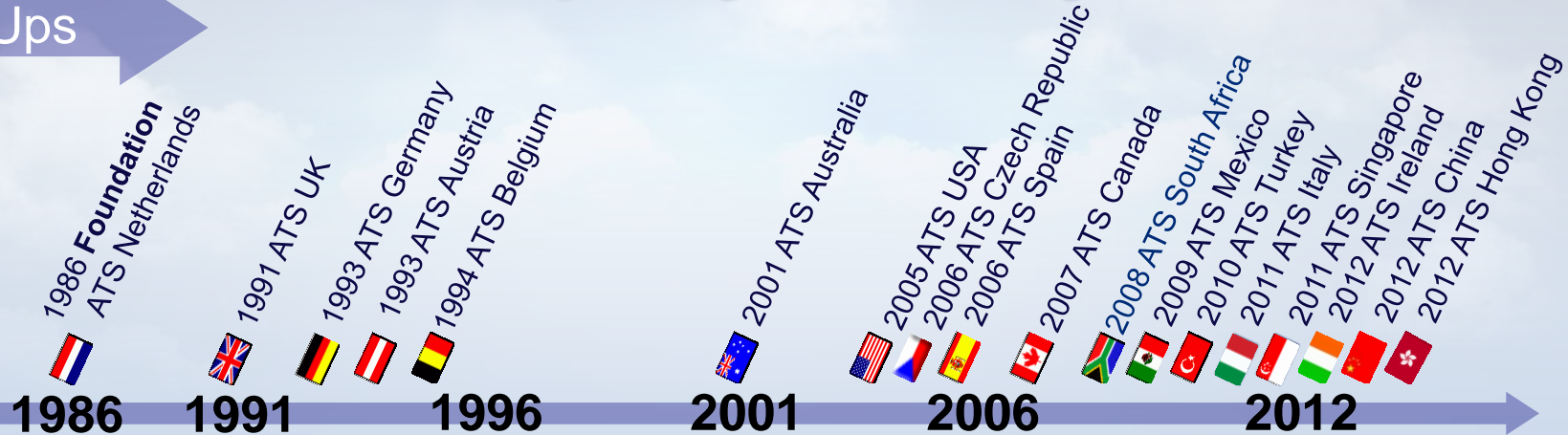
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[@ATS UK MK](#)



Company History

Start Ups



Trading – Automation Services – MES Services – Global Partner

Society

Economy

Sustainable Development

Environment

Acquisitions

- 2001 SES Germany (MES)
- 2008 Alka USA (Mechanical Systems)
- 2008 Blue Cedar UK (Training)
- 2009 ASI-DataMyte UK Ltd. (gauging & measurement)
- 2011 Inspect USA (Quality Systems)
- 2011 Nairda Ltd. (gauging & measurement)
- 2012 OceanModus Ltd. (MES)
- 2012 CMAD, USA (product quality validation)
- 2012 ICT Automatisering DE (industrial automation)



The Knowledge Partner



Control Technology



SCADA / HMI



Programming Languages



Quality, Lean, Six Sigma



Communication & Networks



Databases

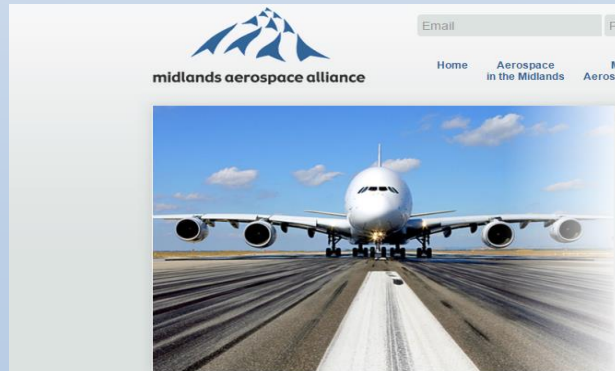
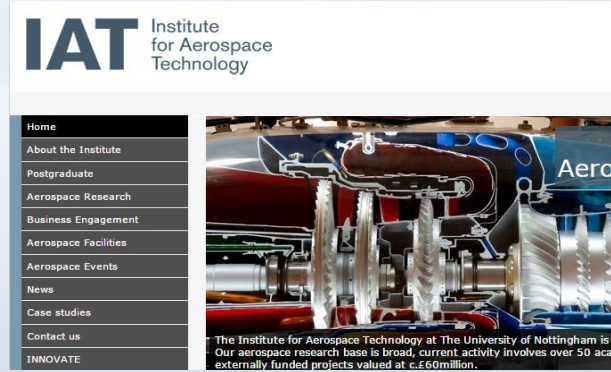


Supply Chain Management



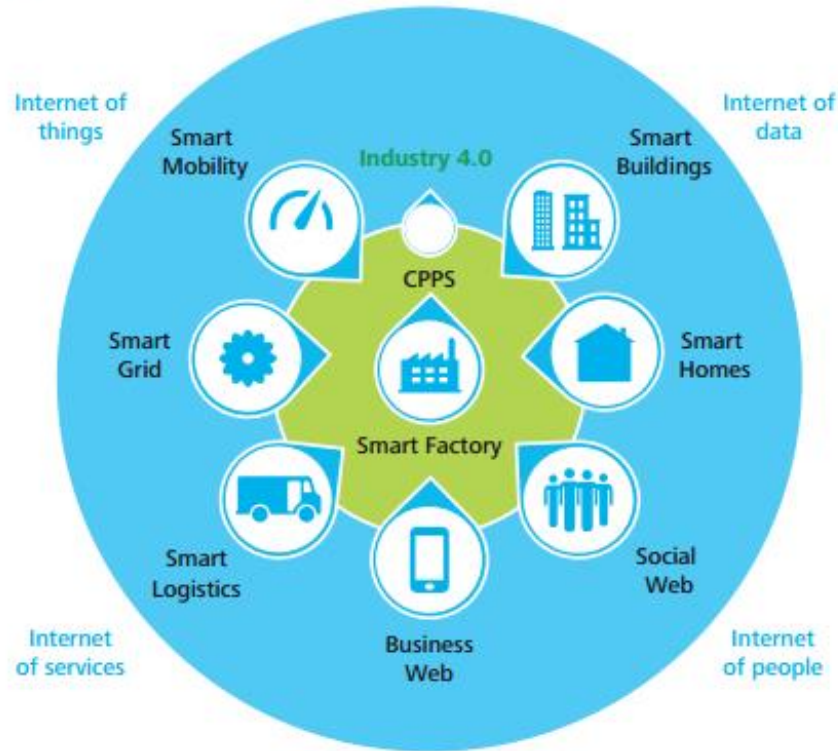
Manufacturing Execution Systems

ATS Innovation Partners



Industry 4.0 Concept

Chart 2. The industry 4.0 environment²



“Most people overestimate what they can do in one year and underestimate what they can do in ten years.”

5 Critical Steps to Industry 4.0

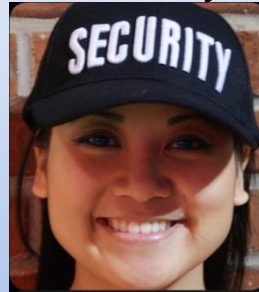
Mobile Devices



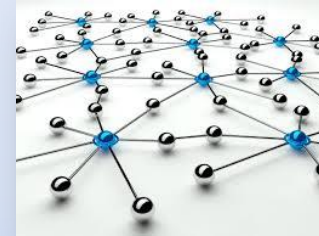
Applications



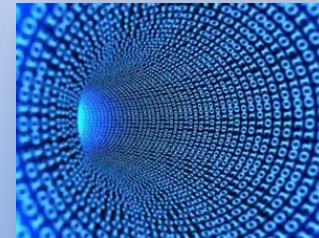
Friendly
Security



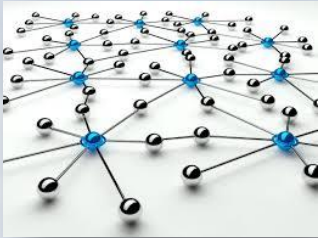
Flexible Networks



Manageable Data



Flexible Networks - Analysis



Part1

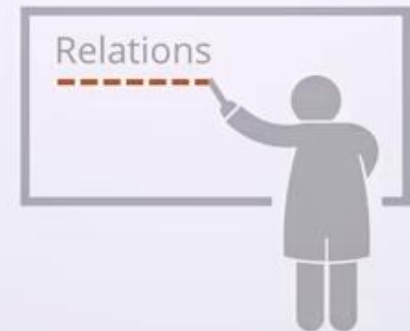
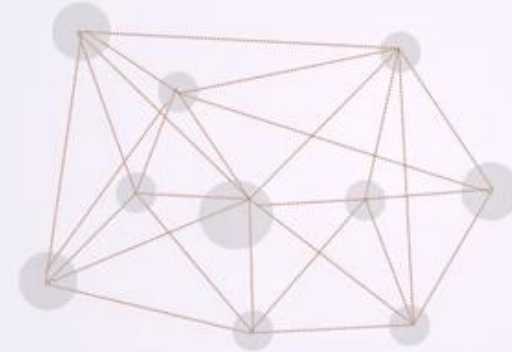
Part5

Part4

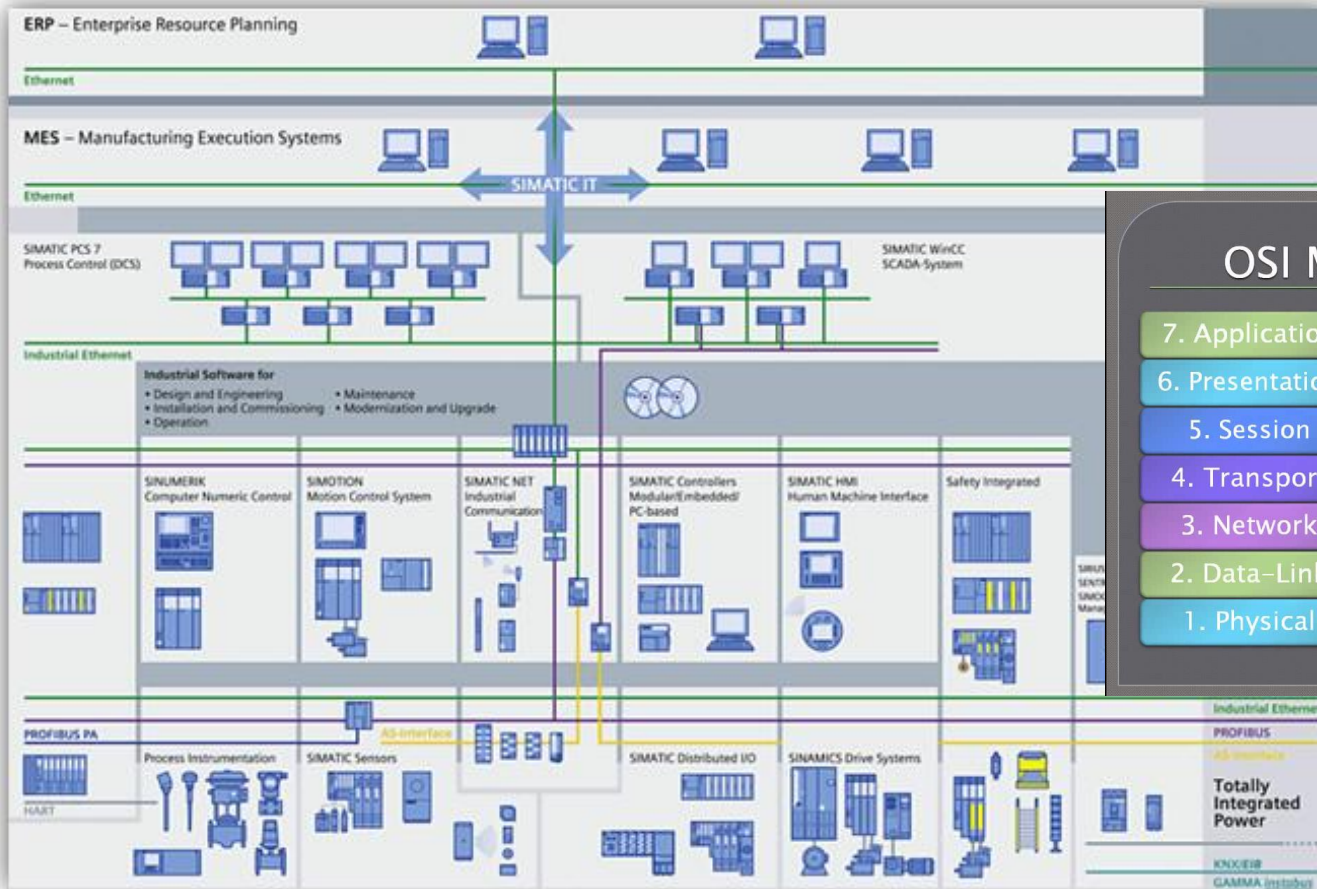
Part2

Part3

Part6



Flexible Networks – Technical LANs



OSI MODEL OPEN SYSTEMS INTERCONNECTION MODEL

- | | |
|-----------------|--|
| 7. Application | • FTP, DNS, HTTP, DHCP, Telnet |
| 6. Presentation | • ASCII, GIF, MPEG |
| 5. Session | • Controls sessions between applications |
| 4. Transport | • TCP, UDP, SPX |
| 3. Network | • IPV4, IPV6, IPX, IPSEC, Routers |
| 2. Data-Link | • 802.3 (Ethernet), ATM, Frame Relay, Switches |
| 1. Physical | • 010101010101, Hubs, Repeaters |

Mobile Devices

User Devices



Power to the mobile

Location Awareness



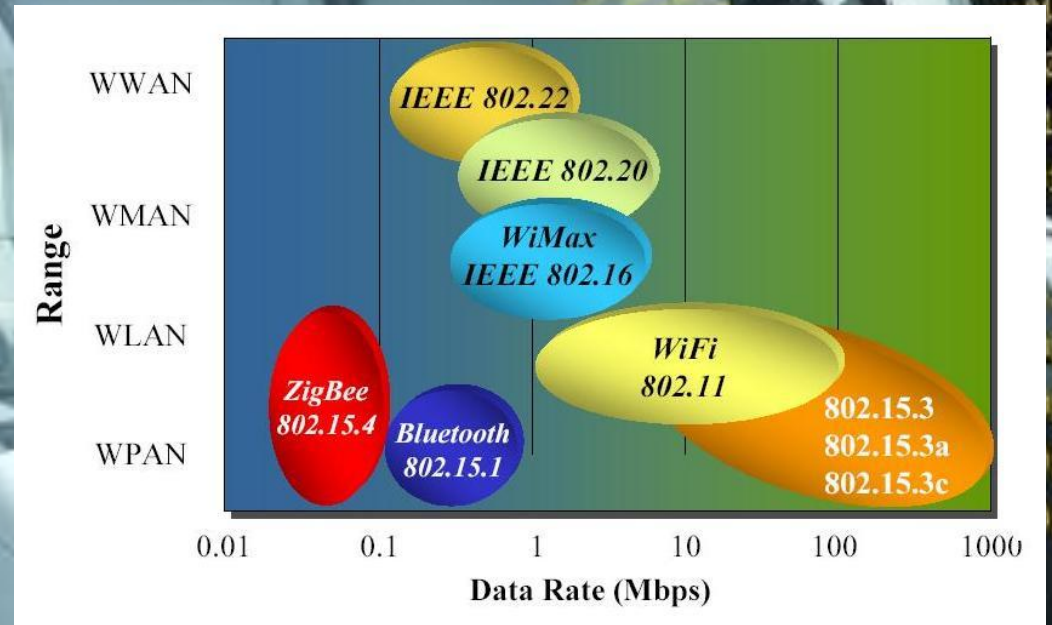
Controllers



Sensors

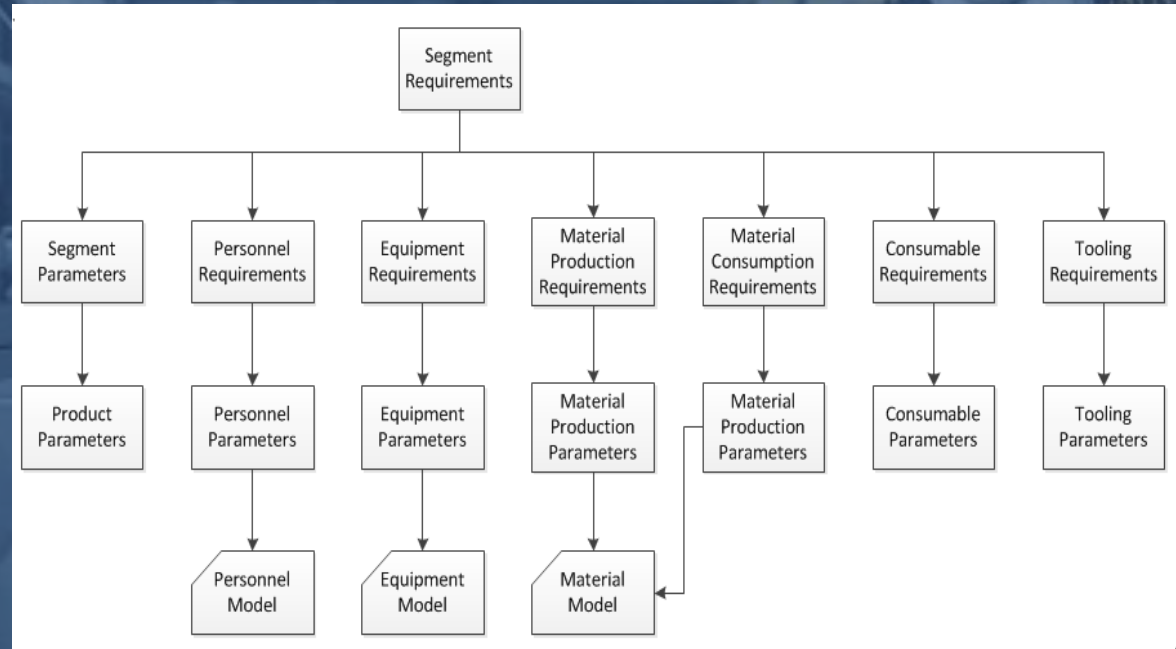


Mobile Devices – Mobile Networks



Industry 4.0 Data

- Master Data
- Control Data
- Real-time Data
- Business Data
- Customer Data
- Compliance Data



Isolated / Closed / Open System Configuration

ATS Bus - Solution Overview

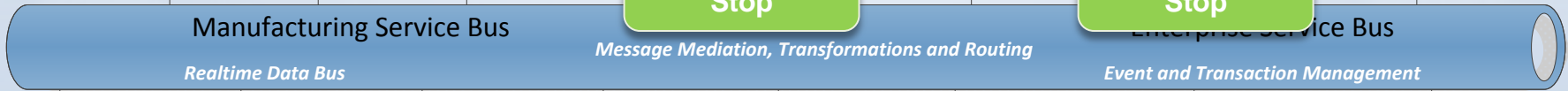
Configuration and Deployment Management

Configuration Cockpit



Monitoring Stop

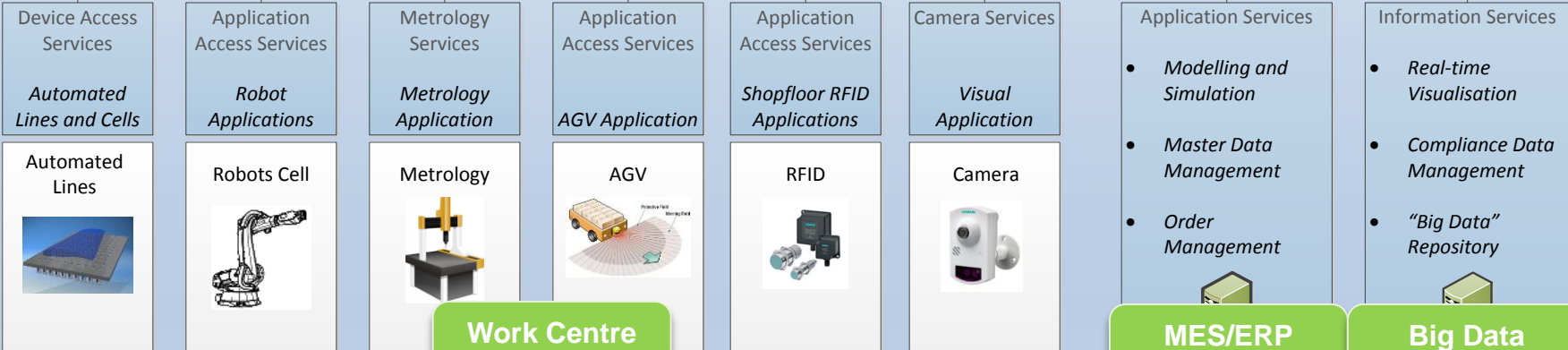
Orchestration Stop



M 2 M Messages

P 2 M

B 2 M Messages



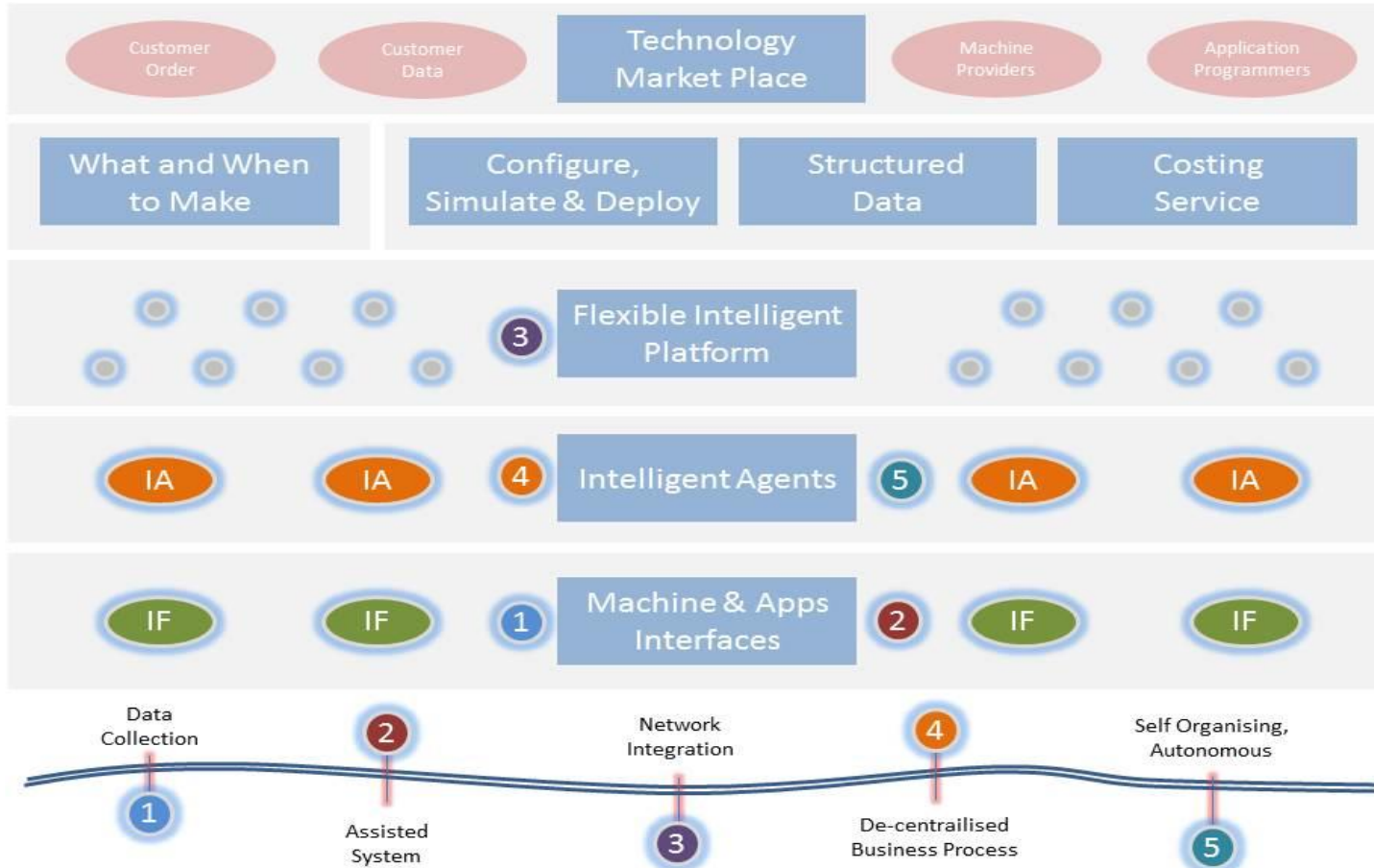
Work Centre Stops

MES/ERP Stop

Big Data Stop



Industry 4.0 Marketplace



What Does a “Fourth” Plant Look Like?

- Self-organising
- Machine to Machine (m2m) communication
- Product to Machine (p2m) communication
- Modular and flexible
- It will appear to work without people but the people will be the intelligence

Thank you

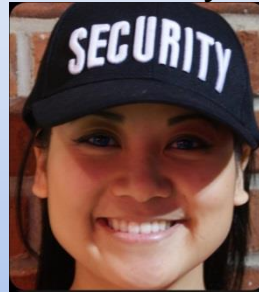
Mobile Devices



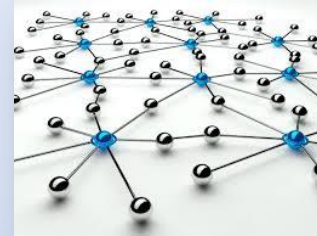
Applications



Friendly Security



Flexible Networks



Manageable Data

