



Irish Manufacturing and it's readiness for Industry 4.0

Andrew Lynch

Chief Innovation Officer

Irish
Manufacturing
Research

Research & Technology Organisation

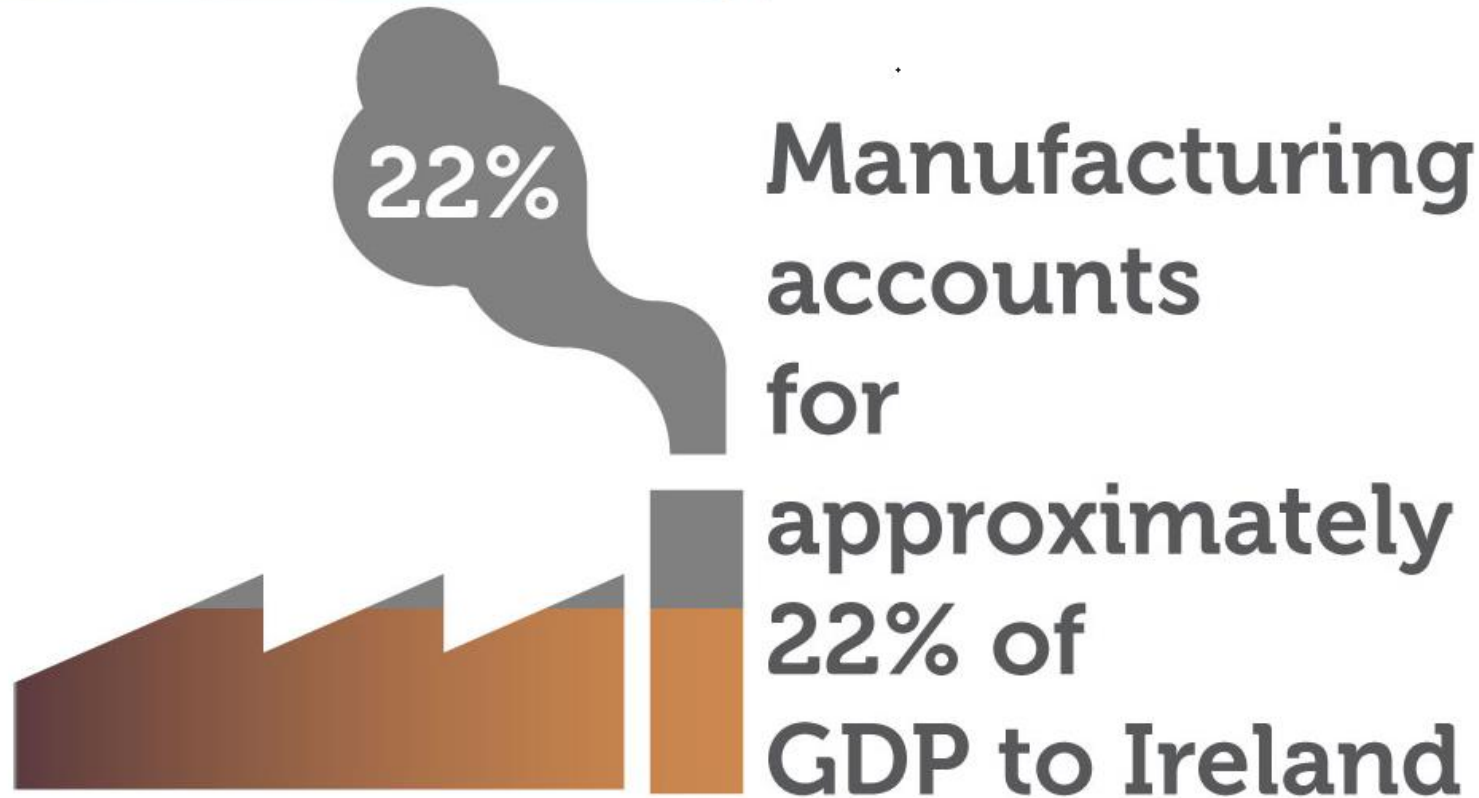
ADVANCED MANUFACTURING IRELAND



Source: Cordant People

Manufacturing

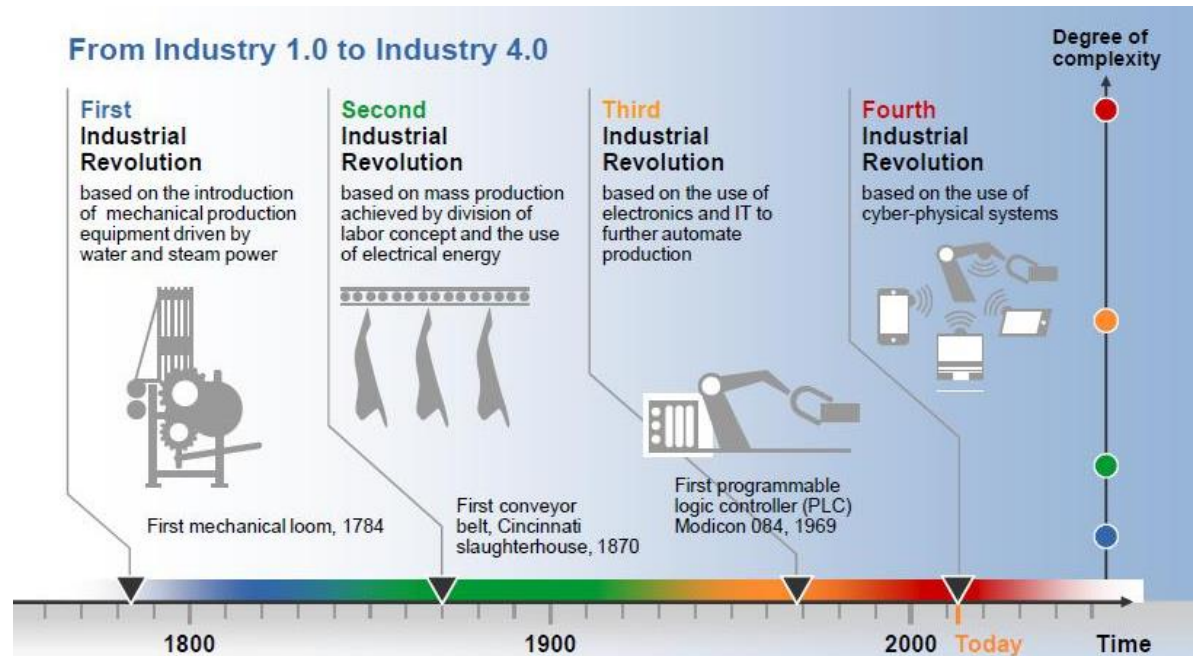
Ireland



Source: Cordant People

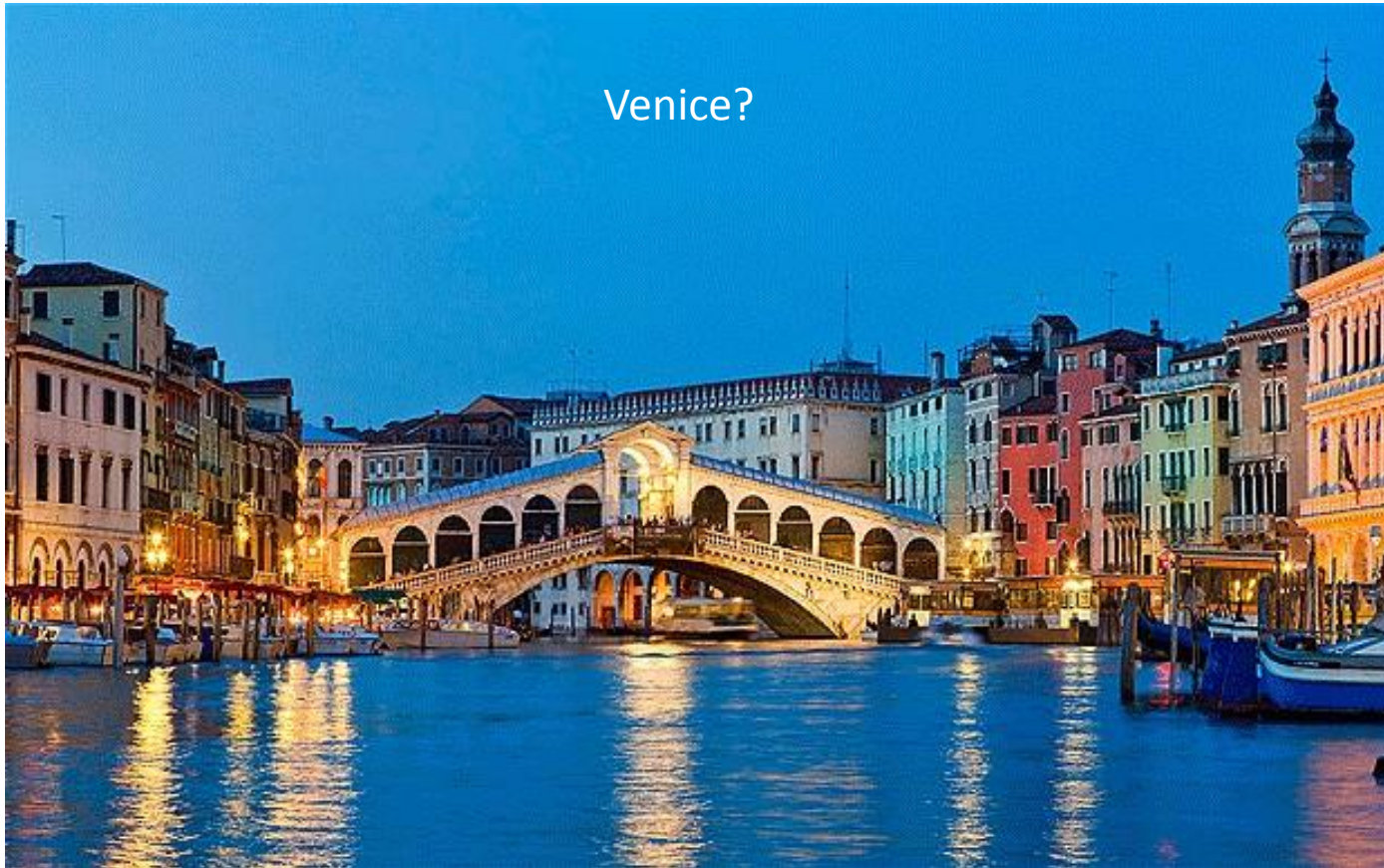
What is Factory 4.0 ?

Factory 4.0 is also referred to as **Industry 4.0** (Germany), **Manufacturing 2025** (China), and **Manufacturing 4.0** (US)



Source: EDN.com

Venice?



1450 there were over 3,000 Venetian Great Galleys in operation

How?

- (a) Artisan Ship Builders
- (b) Slavery
- (c) Multinationals
- (d) Other





16,000 employees

1 ship/day Vs 1 ship/month

1593 Galileo was a management consultant !

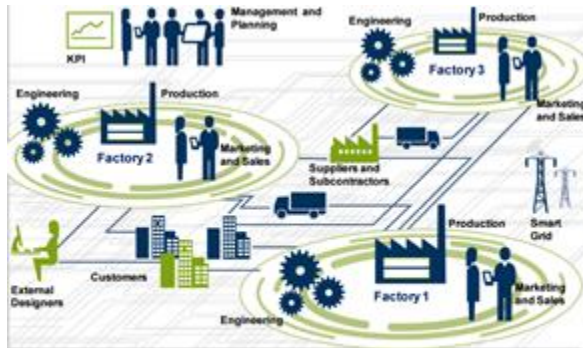
Shift patterns

Unions / Employee Representatives

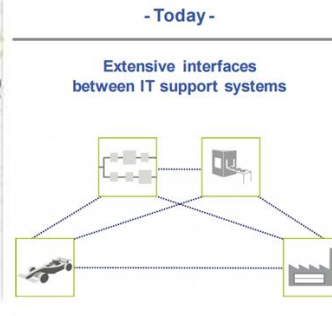
Plant in Corfu (maintenance only)

Canals used as conveyor belts

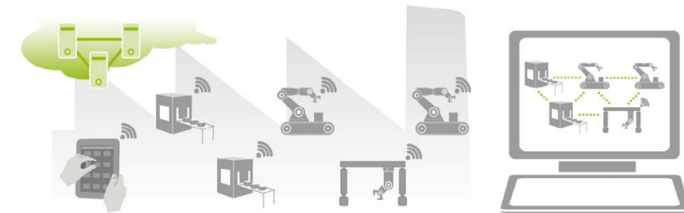
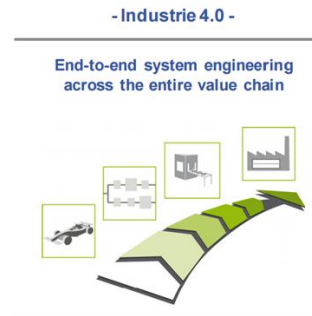
Characteristics of Factory 4.0



Horizontal value network
(Source: Kagermann et al. 2013, p. 26)



End-to-end system engineering along the entire value chain
(Source: Kagermann et al. 2013, p. 35)



Vertical integration and networked production systems
(Source: Kagermann et al. 2013, p. 36)

- Horizontal linking of multiple systems across corporate boundaries
- Standardising data so it can be read or manipulated by another device
- Vertical linkages in production processes

Why Embrace Factory 4.0

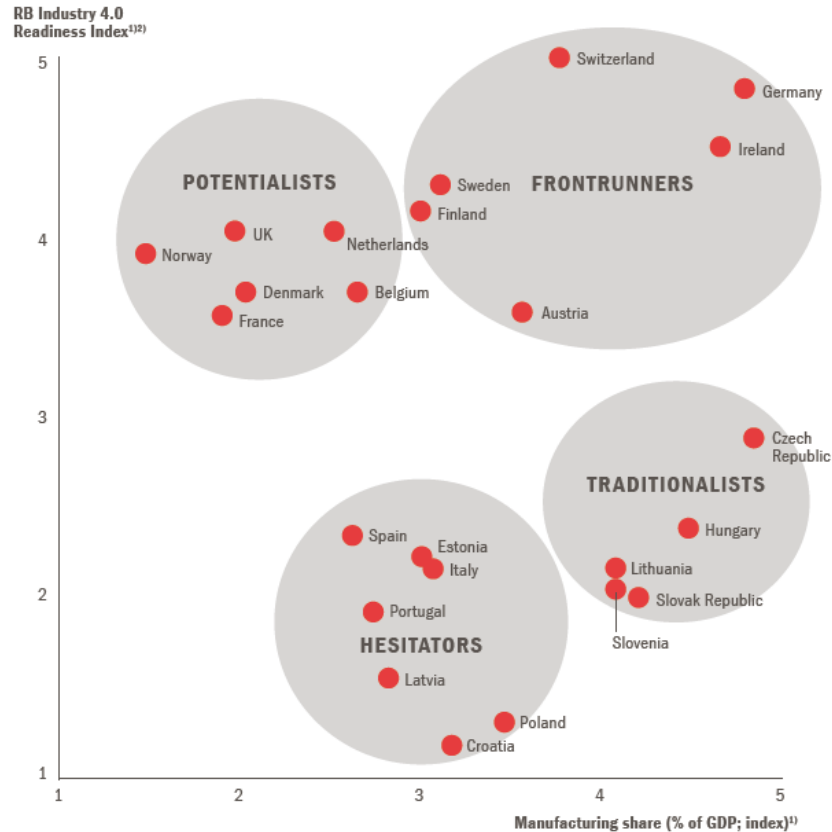
Manufacturers must adopt a more **agile approach** to product demands and embrace new technologies like:

- Collaborative Robotics
- Augmented Reality
- Automated Visual Inspection Systems
- Additive Manufacturing



Source: Siemens.com

Ireland's Readiness



(Source: Roland Berger, 2015)

- RB Industry 4.0 Readiness Index - calculated by measuring Industrial excellence & combining with value network both on a 5-point scale
 - Industrial excellence was calculated by evaluating process sophistication, degree of automation, workforce readiness, and innovation intensity
 - Value network was calculated by evaluating high value added, industry openness, innovation network and internet sophistication

Advanced Manufacturing Ireland



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Thank You