

FIDIC-GAMA 2017



Conference on Infrastructure

7 - 10 May | Cape Town | South Africa

African Partnerships for Sustainable Growth

CONSULTING ENGINEERING IN THE FACE OF DISRUPTIVE TECHNOLOGY

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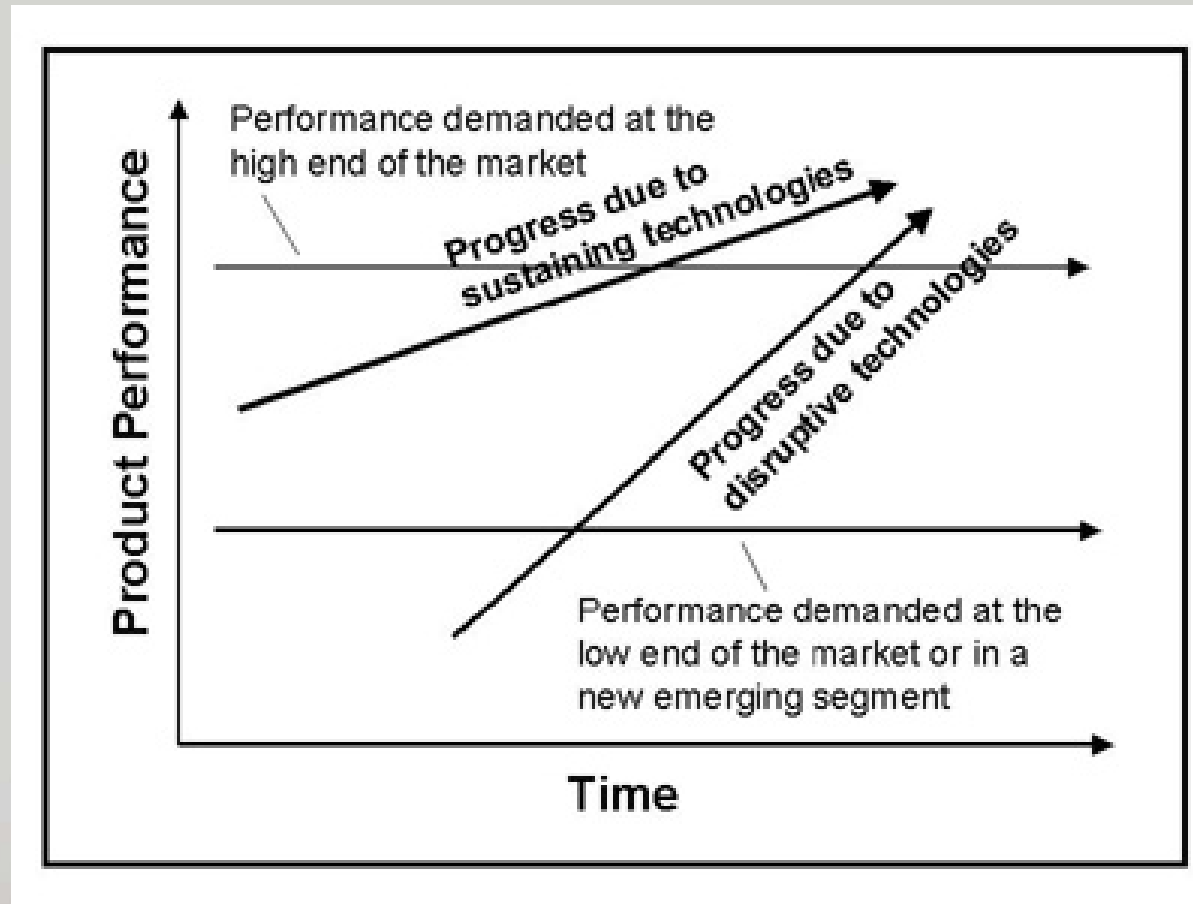


The Power of Technology





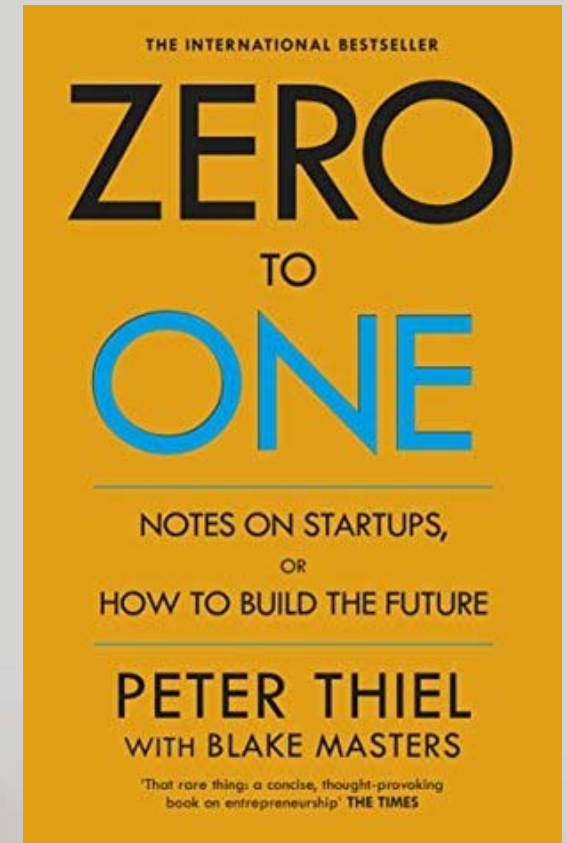
Disruptive Technologies



Source: The Innovator's Dilemma, Professor Clayton Christensen

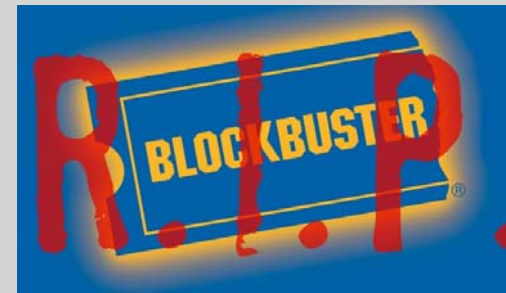


Business Unusual





The Failure to Innovate

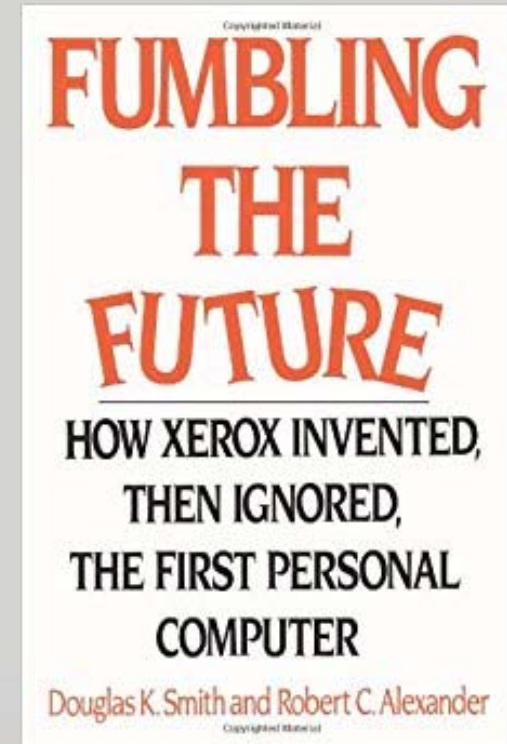




Failure to act on Innovation

Nothing is more
expensive than a
missed **opportunity**.

H.Jackson Brown JR. // Quoteistan.com





How technology has impacted the professions - Education



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How technology has impacted the professions – Medical & Journalism

Medical:

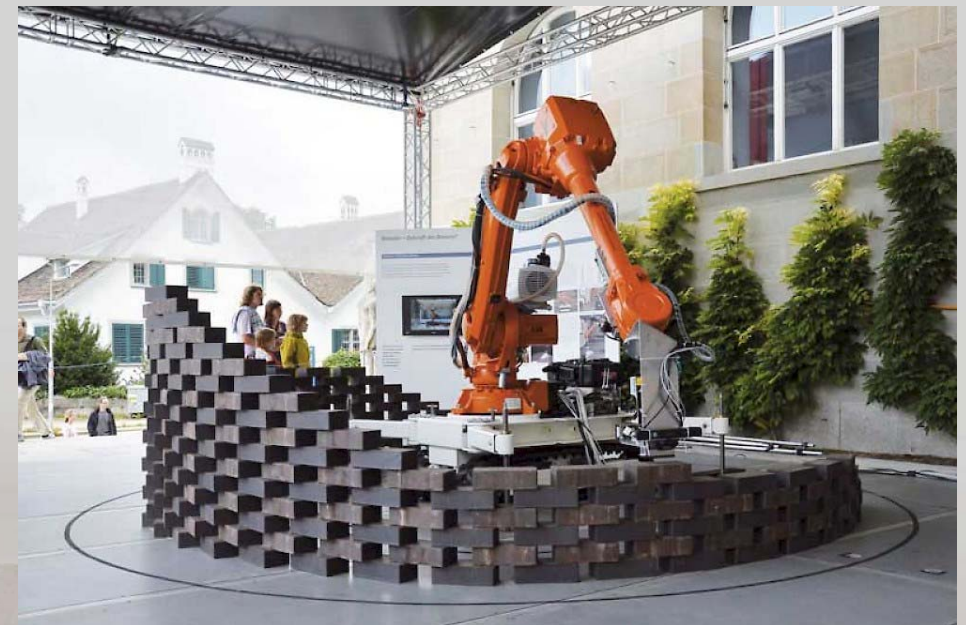


Journalism:





How technology has impacted the professions – Construction with autonomous robots





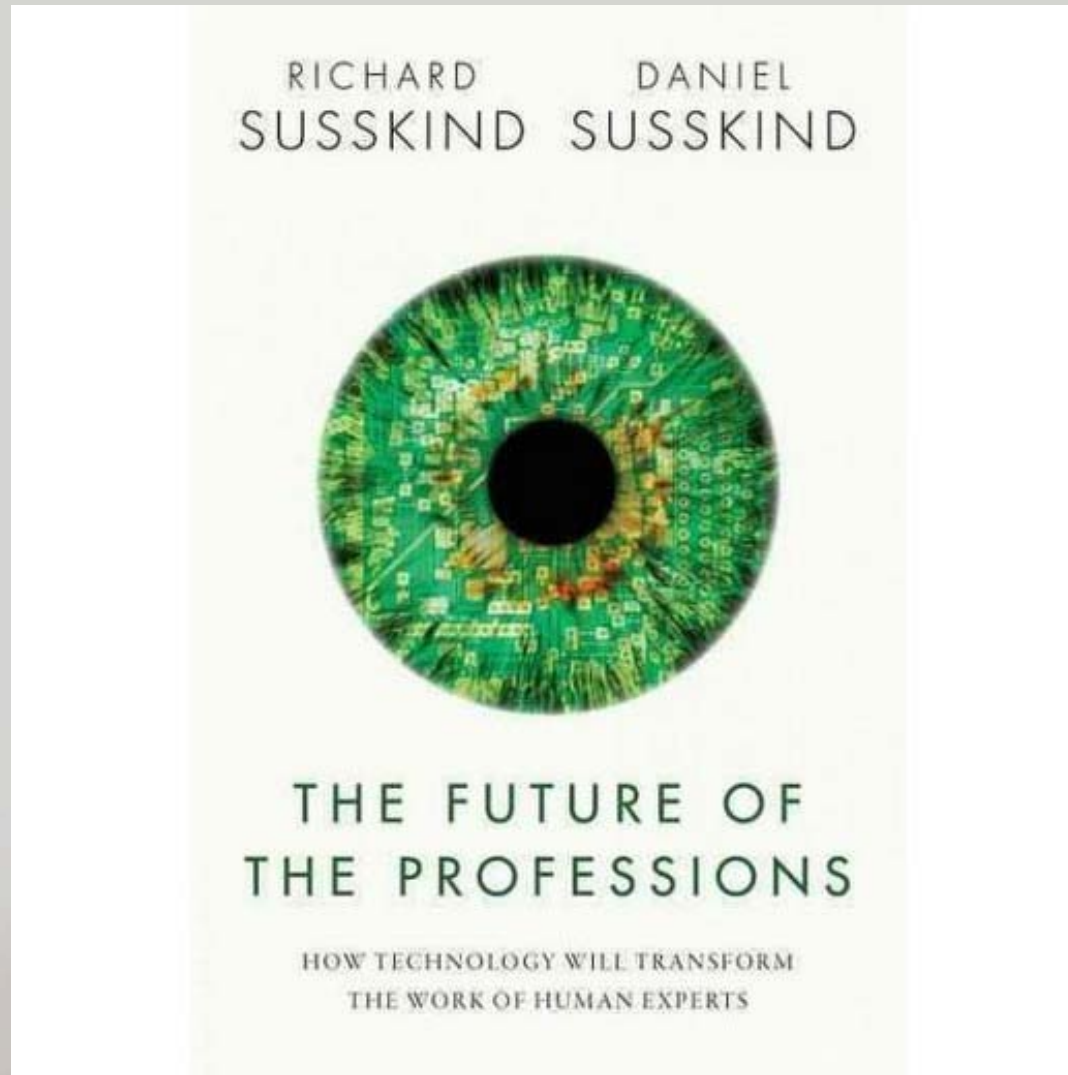
How technology has impacted the professions – 3D Printing

DUS.



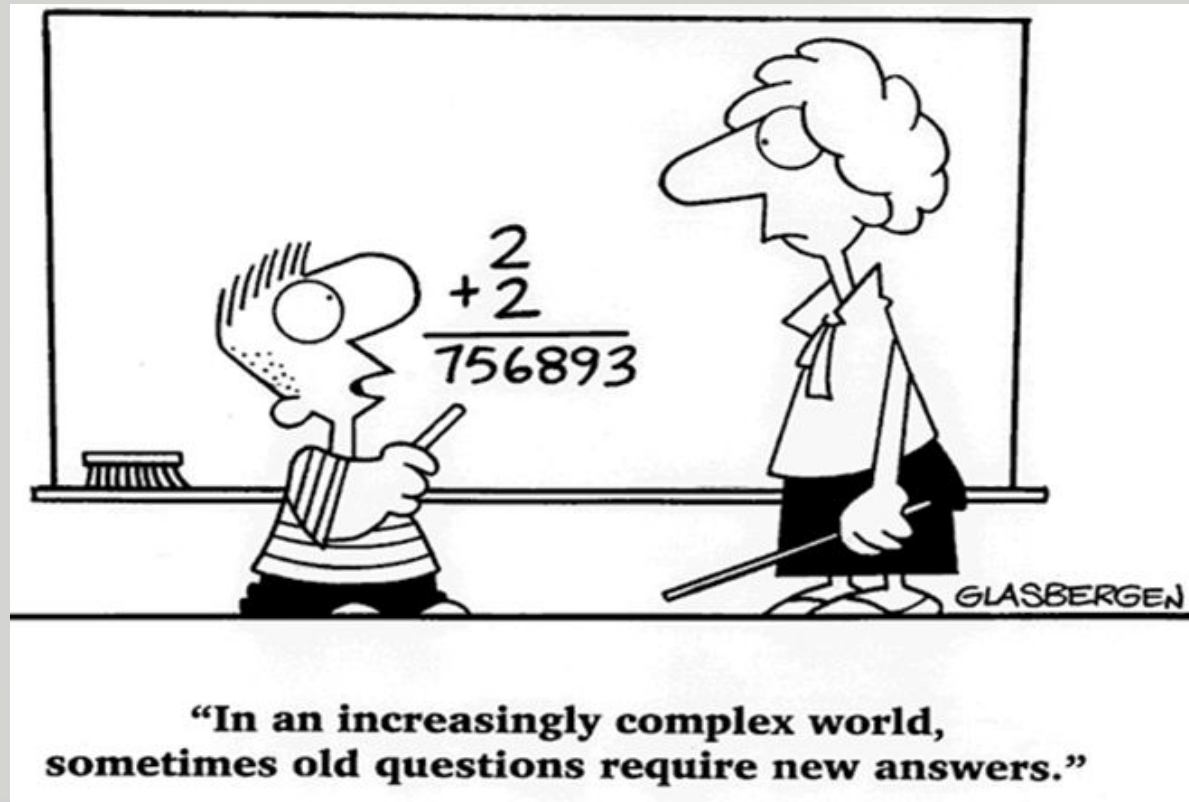


The Future of the Professions





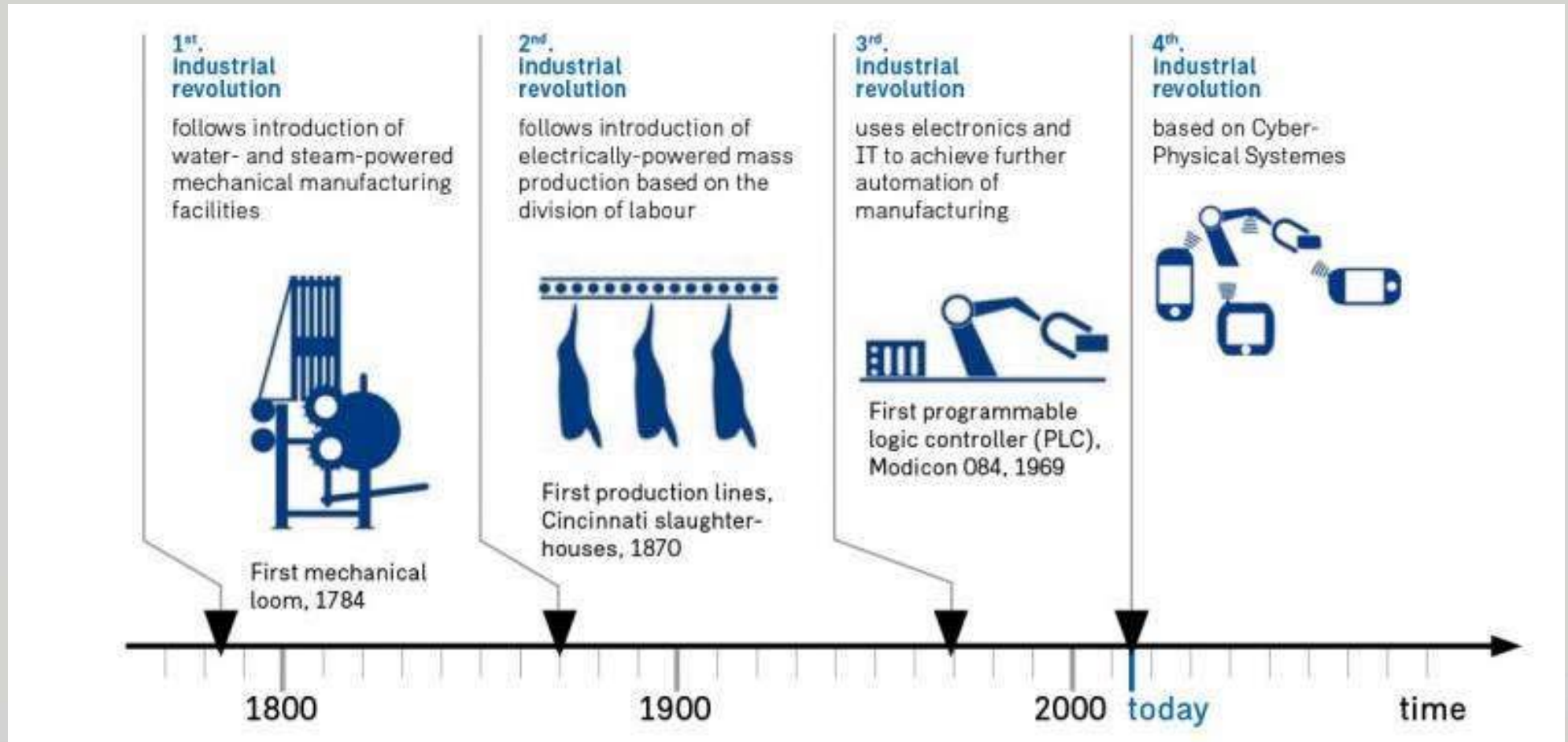
Why do we have the professions?



*"We are currently preparing students for jobs that don't yet exist using technologies that haven't yet been invented in order to **solve problems** we don't even know we have" Melsa, 2007*



The Industrial Revolutions



Source: MotherboardVICE



Technology: Where is this going?

Technology #1: Exponential Growth

Processing power, data storage and band width

Technology #2: Increasingly capable systems

Statistical analysis, robotics

Technology #3: Increasingly pervasive

Smart phones, tablets

Technology #4: Increasingly connected

Social media, online communities, crowd sourcing



Commoditisation of Professional Services

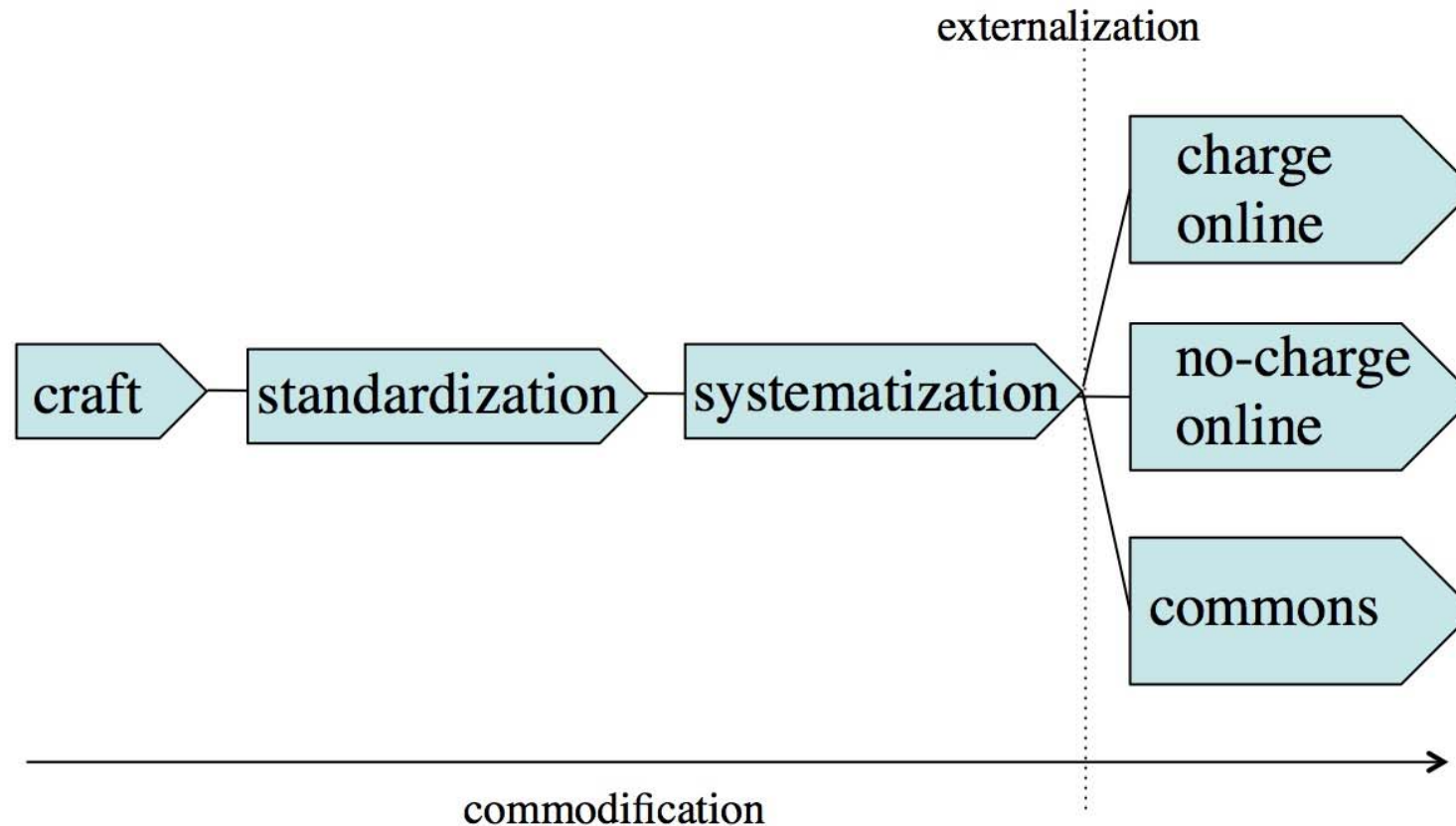
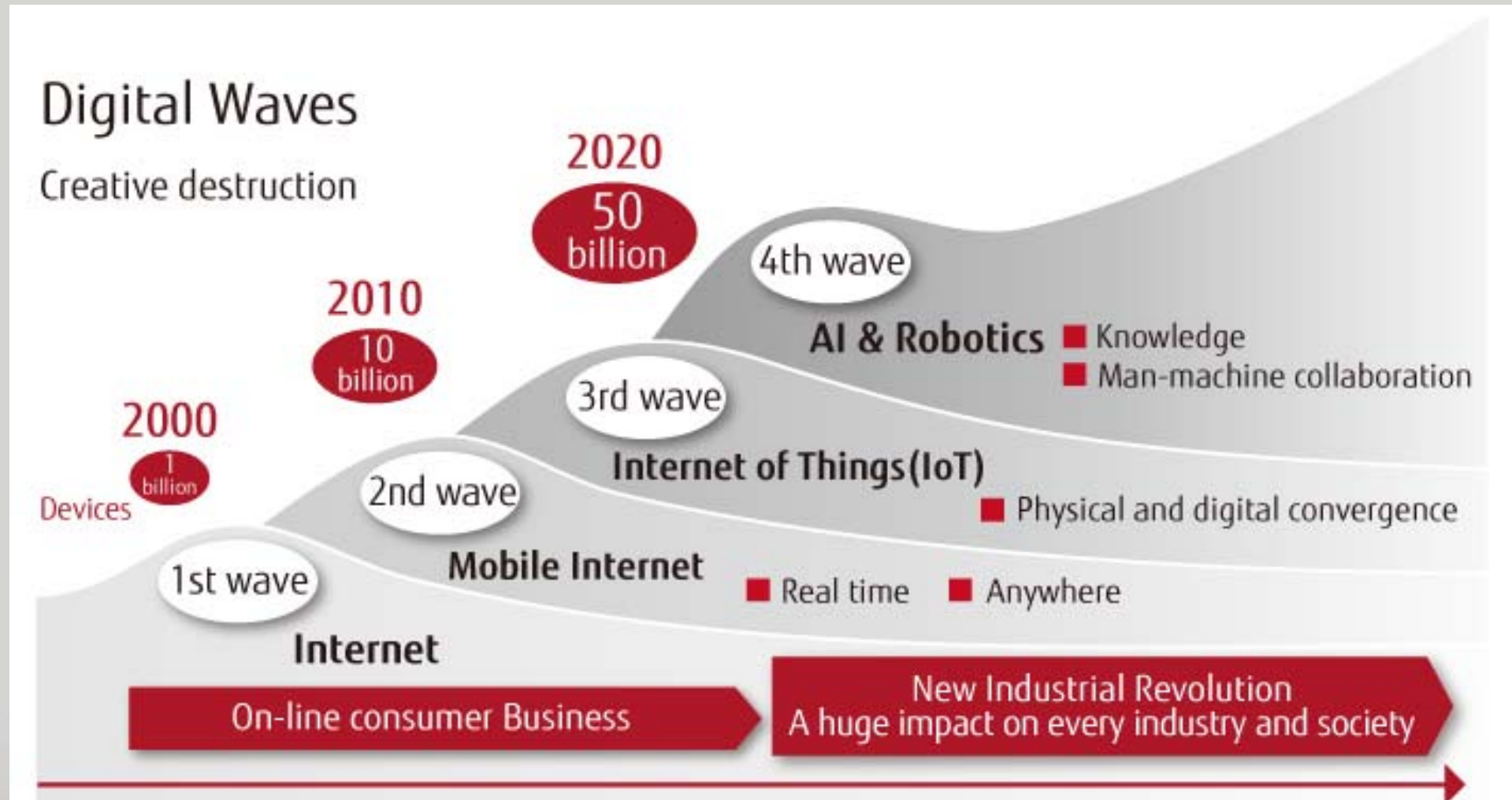


Figure 5.1 The evolution of professional work, Susskind and Susskind, 2015, p.197



Are computers getting smarter?



Source: <http://journal.jp.fujitsu.com/en/2016/01/12/01/>



Will there be jobs left for human professionals?



“There are lots of ways of being smart that aren’t smart like us”. Patrick Winston



Oversight Leads to Failure

Failure #1:

Poor Management Decisions

Failure #2:

Organisation Size

Failure #3:

Integration & Leadership

Failure #4:

Relying on the experience of established managers



Adaptation for the disruption

Adaptation #1:

Transform our culture and people model

Adaptation #2:

Embrace new technologies

Adaptation #3:

Prepare for more innovation – Anticipate and be ready

Adaptation #4:

Adapt or get left behind



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Thank you for attending.



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