

MSE 2017

CM PRIVACY AND LAW

DIGITAL TRANSFORMATION



TOPICS

- ▶ Definition?
- ▶ Transformation was predictable
- ▶ Technology, price and growth
- ▶ Circle of digital business
- ▶ Data „intelligence“, The four „V“s
- ▶ Datability
- ▶ Legal aspects
- ▶ My Take Away...

DIGITAL TRANSFORMATION

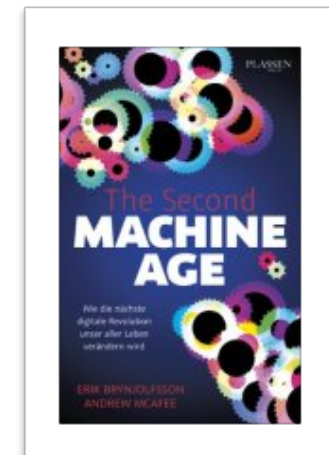
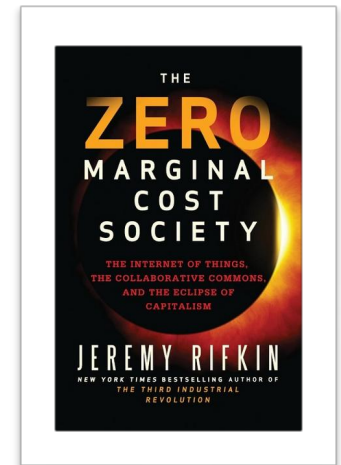
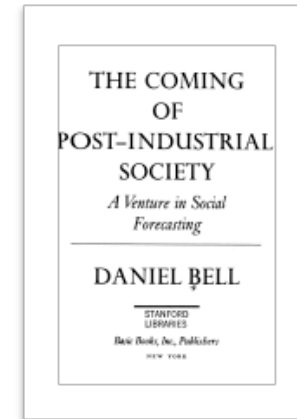


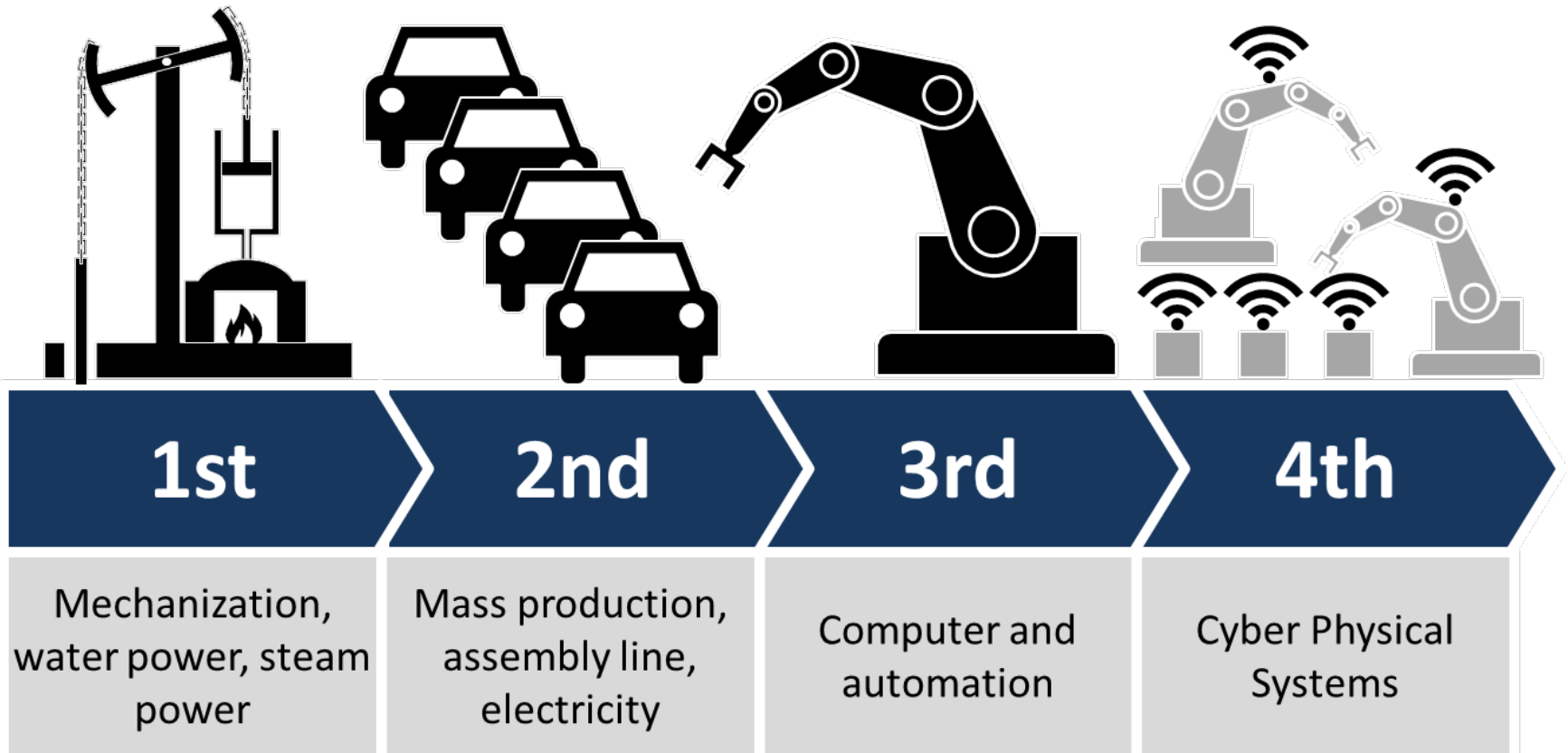
DEFINITION ?

- ▶ Fundamental and disruptive change how we organise us and produce goods and services
- ▶ Key is to collect and digitalise phenomena (data)
- ▶ Large amounts of data is commodity for digital products (big data & analytics)

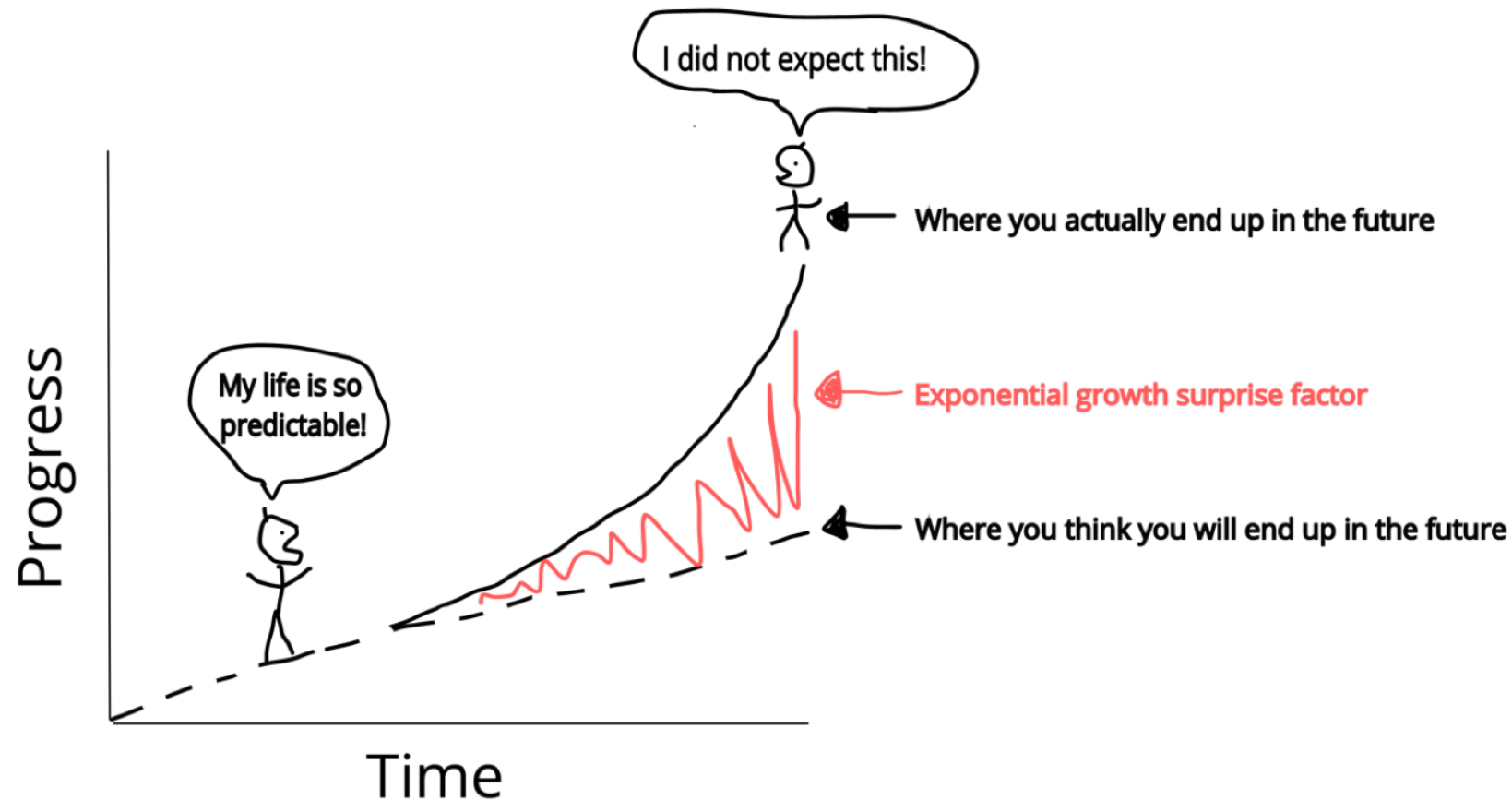
THE DEVELOPMENT WAS PREDICTABLE...

- ▶ Daniel Bell, *The Coming of the Post-Industrial Society*, 1976 (1969)
- ▶ Nicolas Negroponte, former MIT Director, *WIRED*, *Being Digital* (1995), one child one laptop
- ▶ Jeremy Rifkin, *The Zero Marginal Cost Society*, 2014
- ▶ Brynjolfsson/McAfee, *The Second Machine Age*, 2014

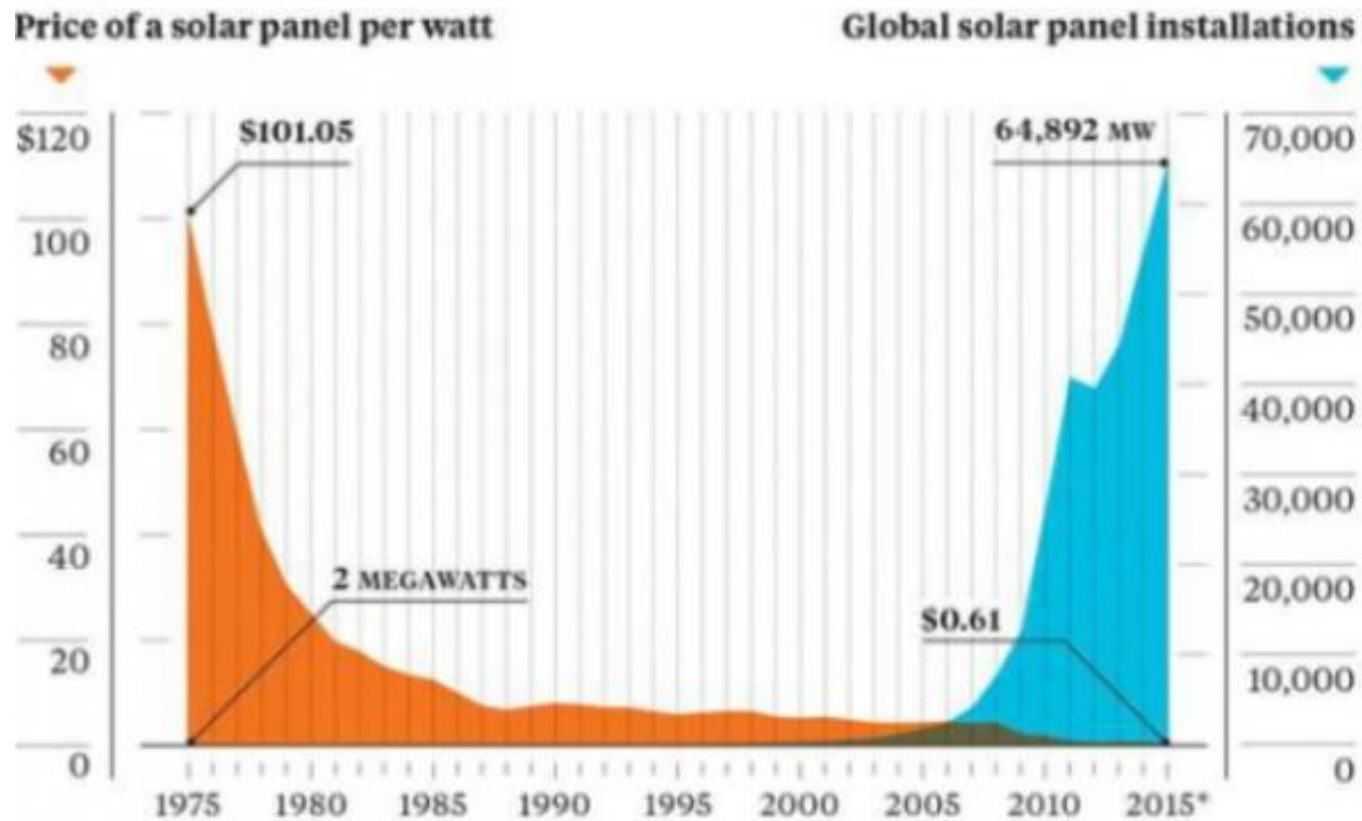




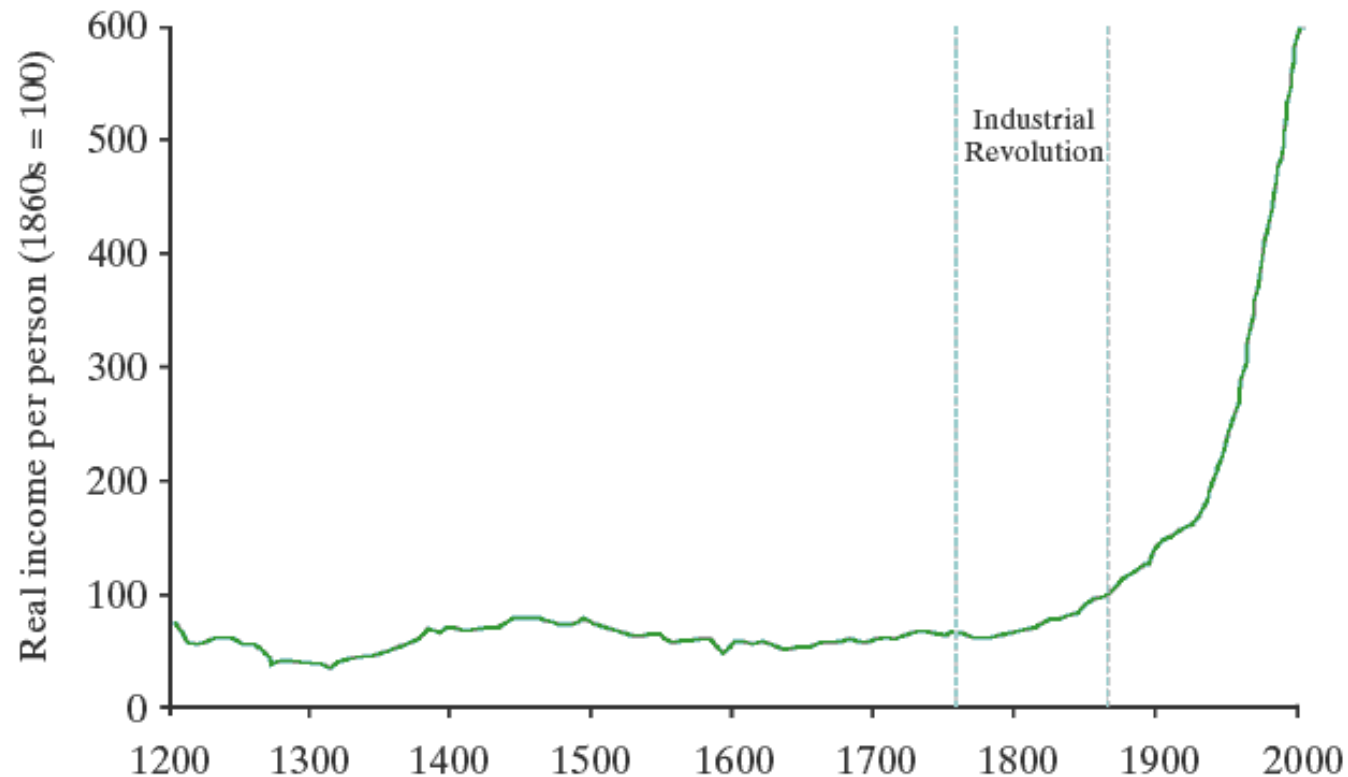
EXPONENTIAL GROWTH OF TECHNOLOGY



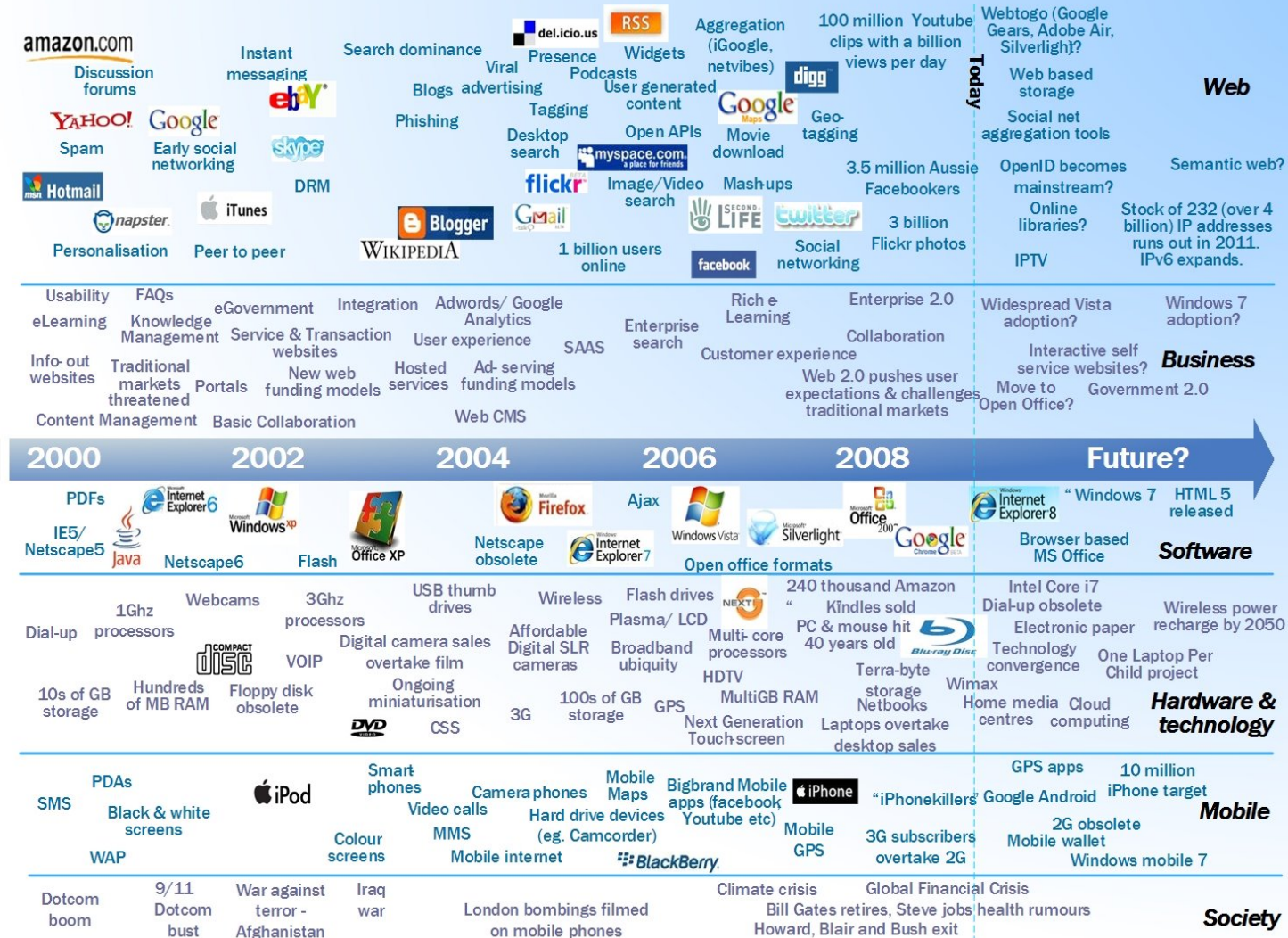
EXAMPLE: PRICE VS. INSTALLATION OF SOLAR PANELS 1975-2015



REAL INCOME PER PERSON IN ENGLAND, 1260s–2000s

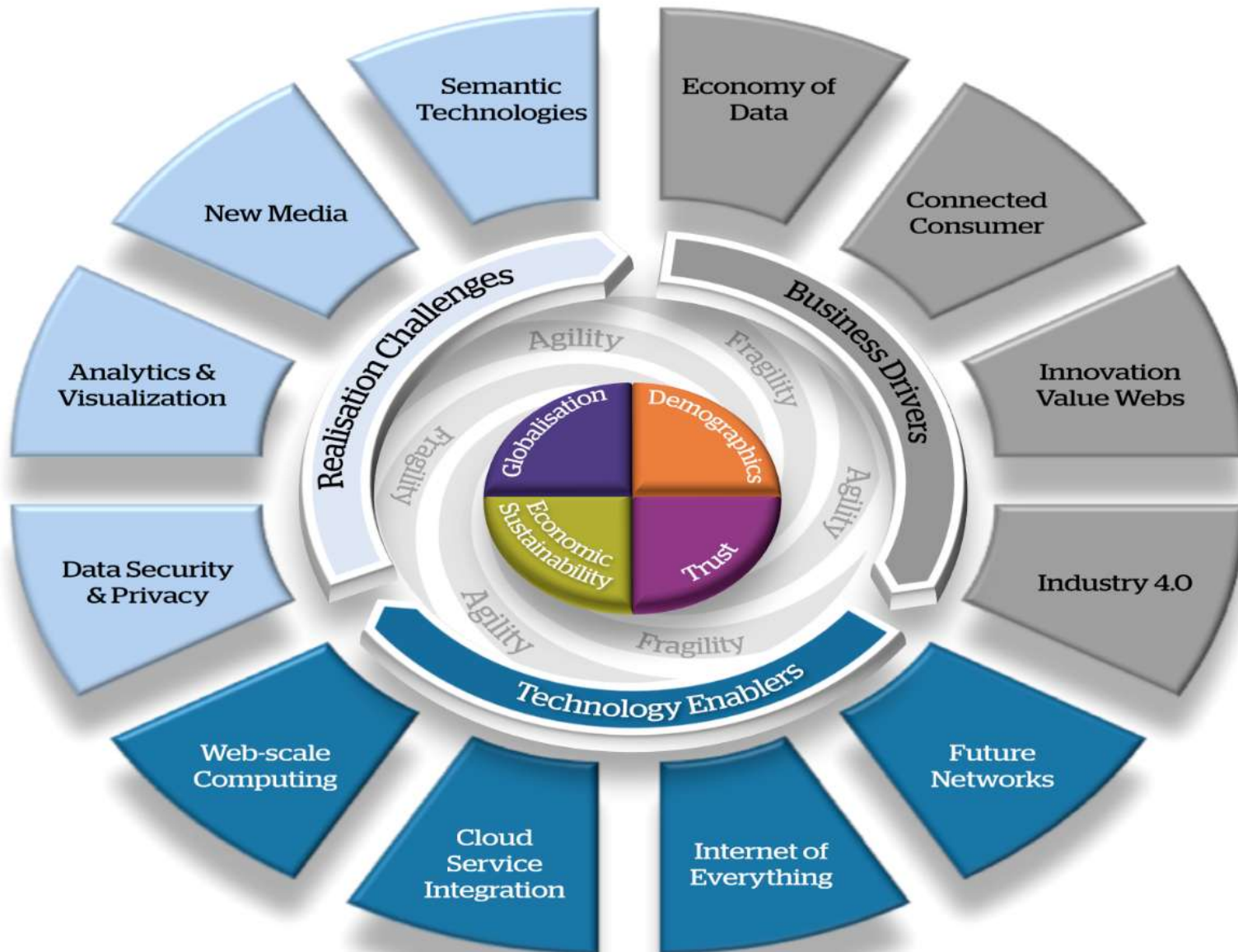


Source: Gregory Clark, *A Farewell to Alms:
A Brief Economic History of the World*

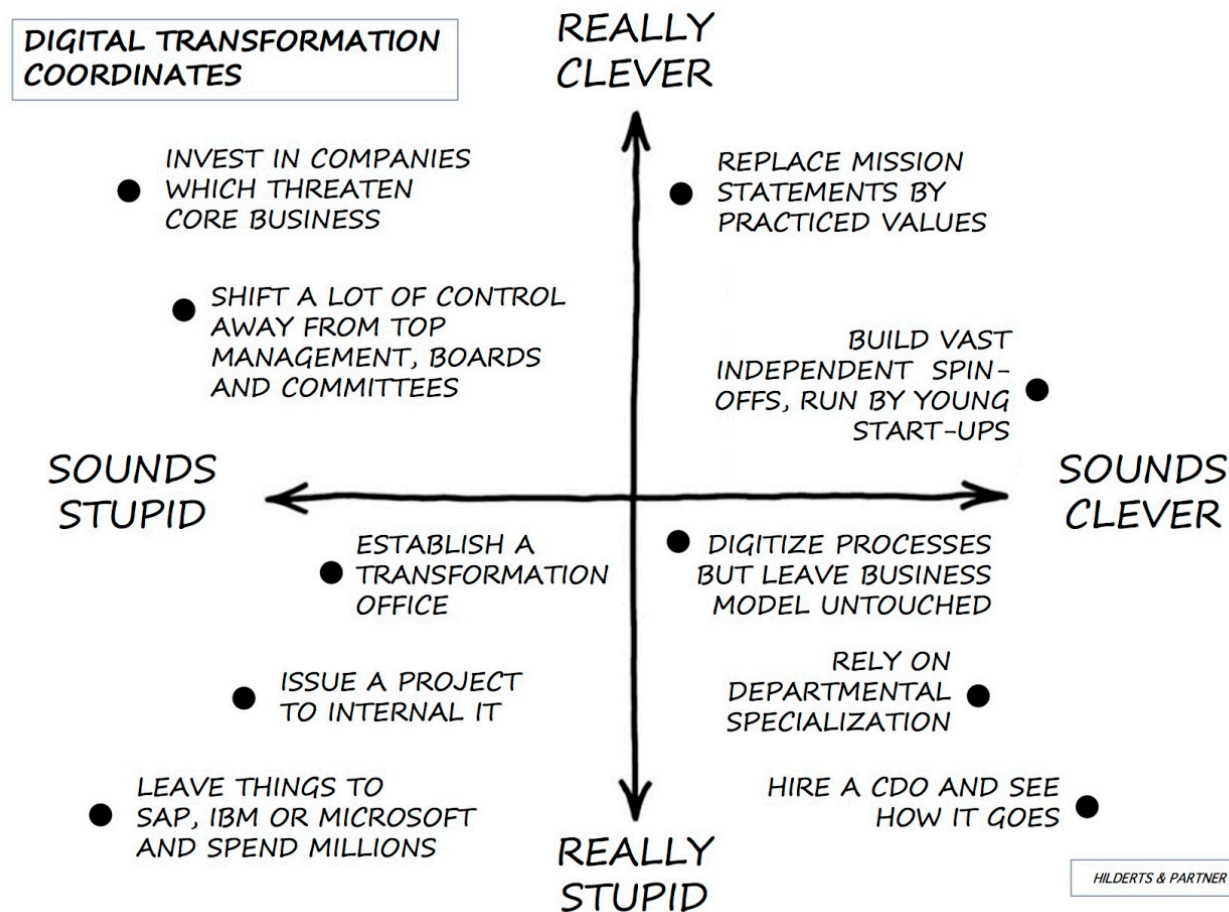


DIGITAL BUSINESS MODELS

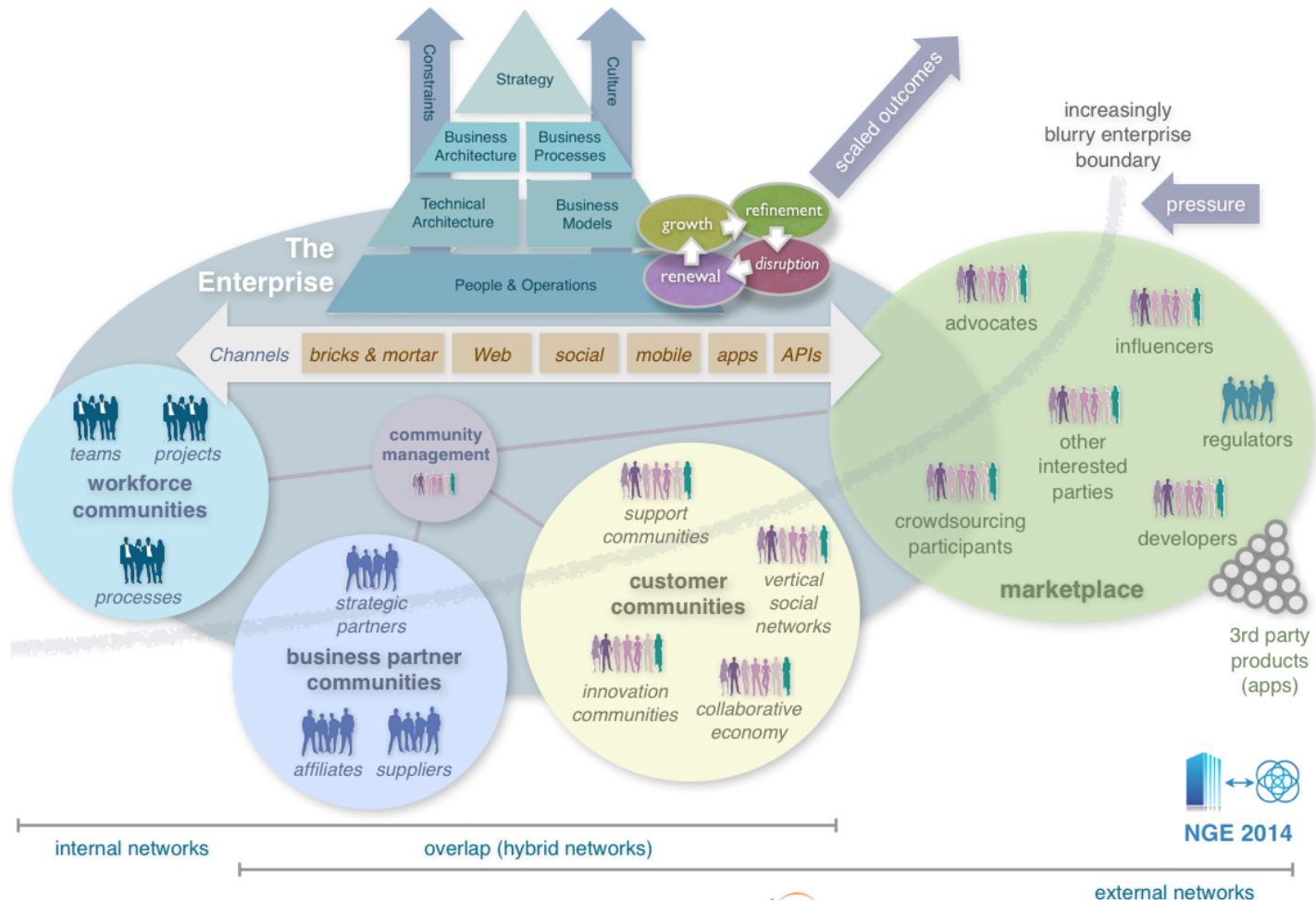
- ▶ Digitalisation offers companies many advantages. This includes for example more customer connectivity, better efficiency and increased sales with new products and services.
- ▶ Watch out! Digital business run on other economic principles than traditional business!



PLANNING THE DIGITAL TRANSFORMATION



Ecosystem View of the Next Generation Enterprise I Circa 2014



DATA „INTELLIGENCE“

- ▶ Data intelligence refers to the analysis of data in a way that allows the data to be used by a company to expand its services or investments.
- ▶ Companies can also use data intelligence to evaluate internal data. This enables them to analyse their own activities and activities of their staff so they can make better decisions in the future. In very general terms, data intelligence should provide useful conclusions for the future from the analysis of current data. When processing personal data, companies must always observe data protection regulations.

BIG DATA

- ▶ The term "big data" stands for a large volume of data from a variety of sources which is rapidly collected, stored and made available for indefinite purposes for an indefinite period of time for analysis and evaluation.
- ▶ This intensive processing is now possible due to technological developments which make it much cheaper and faster to store and evaluate huge data volumes.
- ▶ New methods and technologies facilitate the analysis and linking of very large amounts of data with ease. Algorithms are applied to large databases in order to recognise new patterns, similarities, relationships or discrepancies.
- ▶ Free software (i.e. Torch or Sensorflow) and cheap hardware (Nvidia) enables to develop cheap and fast such analysis-tools/products.

THE FOUR „V“

- ▶ Big data can basically be defined through four features. They are known as the four „V“s:
 - Big data involves large amounts of data (**VOLUME**) that are...
 - ...processed at high speed (**VELOCITY**).
 - The third V is the **VARIETY** of data. Big data permits new options of combining data from different sources that previously had no connection. Pattern recognition!
 - Finally, data analysis creates added value (**VALUE**).

DATABILITY

- ▶ Datability means the **responsible** and **sustainable** handling of data (or data media).
- ▶ The word was created to express the fact that data processors also have an important responsibility towards **systems, users** and **the future**. The term has triggered a value discussion and a drive to measure responsibility in the creation of IT systems as well as corporate responsibility. It will certainly also have an effect on **future legislative projects**.

LEGAL ASPECTS OF DIGITALISATION OF COMPANY PROCESSES

- ▶ Regulations about:
 - handling of digital invoices (EIDI-V)
 - digital data archives (GeBüV)
 - data protection (DSG)
 - duties to inform customers (UWG)
 - Intellectual properties (URG)
 - Unfair competition (UWG)
 - etc. etc.



MY TAKE AWAY...

▶ ...

▶ ...

▶ ...

▶ ...

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