Digital disruptors: On the potentials and characteristics of digital knowledge intensive entrepreneurial ventures

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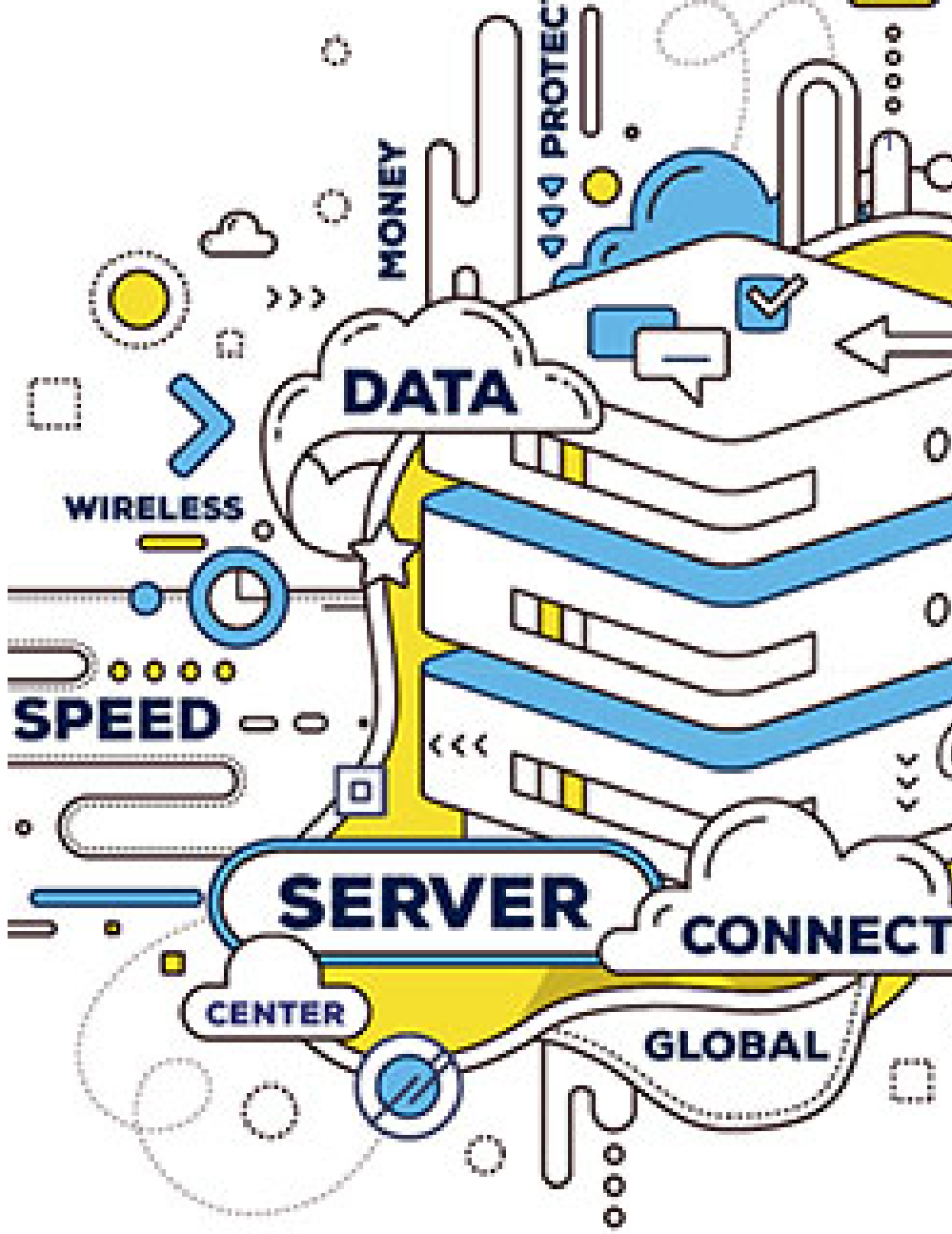

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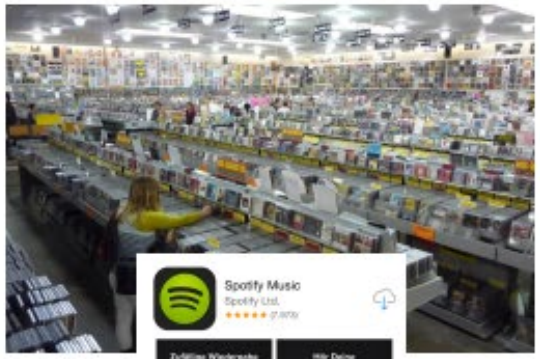
Entrepreneurship and digital disruption

From **bookstore** to **e-book**

From **Yellow Pages** to **marketplace**



From **record store** to **streaming**

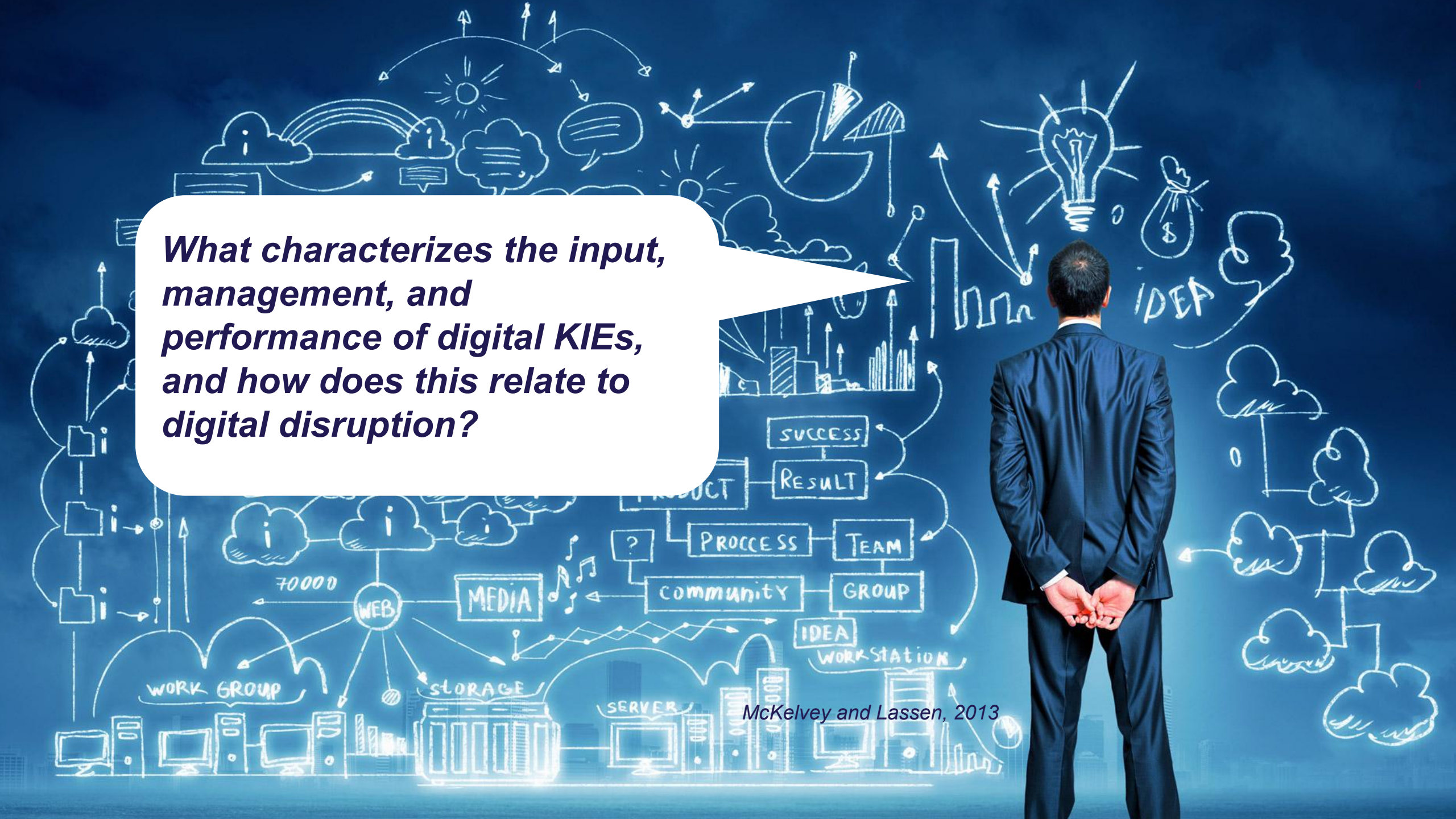
From **taxi** to **ride-sharing**

Disruption

- Christensen (1997/2000) define disruptive technologies as *"an innovation that transforms the complicated, expensive services and products into things that are so simple and affordable that you and I can use them*". …*"disruptive technologies are typically simpler, cheaper, and more convenient than established technologies"*

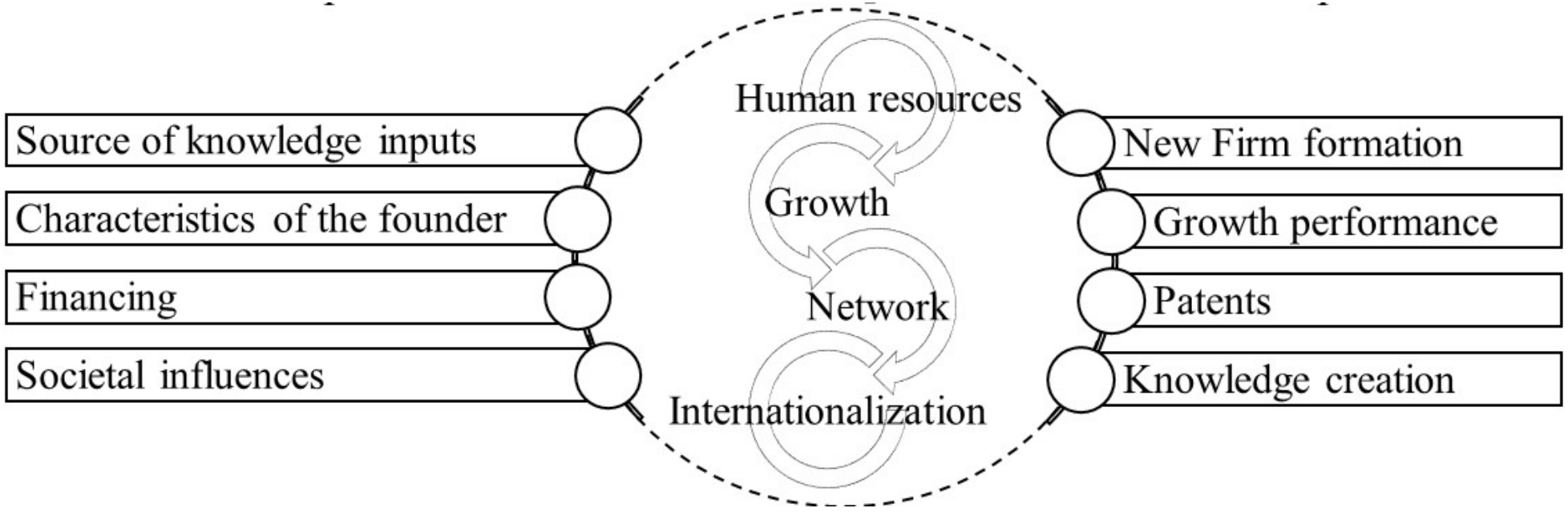
- Robles (2015) argues that, at least in the initial stages, this can include: lower gross margins, smaller target markets, and simpler products and services that may not initially appear as attractive as existing solutions when compared against traditional parameters

- Paetz (2014) argues that the process of disruption is multidimensional and is based on the emergence of new dimensions of value that the old product categories or business models are simply unable to address.


What characterizes the input, management, and performance of digital KIEs, and how does this relate to digital disruption?
IDEA
SUCCESS
RESULT
PROCESS
TEAM
COMMUNITY
GROUP
IDEA
WORKSTATION
MEDIA
WEB
70000
WORK GROUP
STORAGE
SERVER
McKelvey and Lassen, 2013

Data analysis

Sector	Industry classes (Nace Rev. 1.1)	Example of activities included	Example of activities excluded	# identified firms
Computer and related activities	72	Software development/publishing; Website design; IT consulting	IT and computer hardware sales etc.	218
Publishing, printing and reproduction of recorded material	22	Digital printing/publishing; Software development	Sales of IT services etc.; Production of physical media;	27
Other business activities	74	Advertising and web design; Game design; Online marketing	“Traditional” advertising, marketing research etc	10
Misc. manufacturing industries	15, 29, 31, 32, 33	Software development	IT and computer hardware manufacturing etc.	8
Telecommunications	64	Software and mobile application development	Telecommunication hardware, sales s etc.	4
Total				267



McKelvey and Lassen, 2013

Accessing resources and ideas

- Digital KIEs are less reliant on working experience and general market knowledge, and more reliant on technological knowledge and market needs.
  - This indicates a lower reliances on established knowledge sources, and higher focus on customer needs

- The educational level is significantly higher in digital KIEs than manufacturing KIEs.
  - This indicates that that knowledge intensity is very high in such ventures. High knowledge intensity is often needed when various knowledge sources are continuously interacting.

- Funding options to a high extend rely on the most risk willing types capital; own capital and venture capital.
  - This indicates that digital KIEs are either perceived as more risky investments, or they experience greater difficulties in developing structured business plans which outline convincingly the potential of the business. In relation to the disruptive potential of the digital KIE both of these explanations could be plausible.

Managing and Developing the KIE venture

- Protection mechanisms to a high degree rely on confidentiality and secrecy, and to a low degree on patenting.
  - This could be explained by the fact that digital artifacts are often characterized by reprogrammability and recombinability of existing digital technologies

- All external knowledge sources are less important for digital KIEs than for manufacturing KIEs. Only in-house activities are more important for digital KIEs.

- Yet - the capability to form alliances is considered significantly more important for creating market success in digital KIEs than in manufacturing KIE.
  - This result also supports the proposed interpretation that development of digital KIEs is often based on intertwined and diffused knowledge contributions.

- Market success is highly reliant on the capability to offer novel products/services, to adapt and specialize, and to keep costs low.

- Creating premium offers is significantly less important for digital KIEs than for manufacturing KIEs.

Evaluating performance and output

- The innovation performance of digital KIEs is very high, very frequent, and to a large extent focuses on service innovation.
  - This could indicate that the editable features of digital artifacts may in fact facilitate a greater degree of trial and experimentation in how the entrepreneurs go about building their business models, developing and testing solutions, and more broadly addressing new opportunities. This results in significantly less product innovations, but significantly more new to the market innovation.

- Turnover measured on an ordinal scale and the estimated turnover per employee of digital KIEs is significant lower than that of manufacturing KIEs.

- However, the estimated profit per employee is significantly higher.
  - This suggests that digital KIEs in general are financially smaller than manufacturing KIEs, but are more profitable relative to their size. This combination of smallness and profitability supports the emerging image of the potential for digital disruption being fueled by flexibility, adaptability and speed.

McKelvey and Lassen, 2013