Setting the Scene: Skills Requirements for the Digital Transformation
Outline

1. Context

2. Skills Requirements

3. How? When?

4. Main Highlights & Conclusions
A number of disruptive technologies will enable digitization of the manufacturing sector

Digitization of the manufacturing sector – Industry 4.0

Big data/open data
Significantly reduced costs of computation, storage, and sensors

Internet of Things/M2M
Reduced cost of small-scale hardware and connectivity (e.g., through LPWA networks)

Cloud technology
Centralization of data and virtualization of storage

Digitization and automation of knowledge work
Breakthrough advances in artificial intelligence and machine learning

Advanced analytics
Improved algorithms and largely improved availability of data

Touch interfaces and next-level GUIs
Quick proliferation via consumer devices

Virtual and augmented reality
Breakthrough of optical head-mounted displays (e.g., Google Glass)

Additive manufacturing (i.e., 3D printing)
Expanding range of materials, rapidly declining prices for printers, increased precision/quality

Advanced robotics (e.g., human-robot collaboration)
Advances in artificial intelligence, machine vision, M2M communication, and cheaper actuators

Energy storage and harvesting
Increasingly cost-effective options for storing energy and innovative ways of harvesting energy

SOURCE: McKinsey
What are the right skills?

- Calvin’s wisdom

You step into this chamber, set the appropriate dials, and it turns you into whatever you’d like to be.
Organizations want specialized knowledge and expertise

Wanted: specialisation
Priorities when selecting external service providers, % of respondents

- Specialised knowledge or experience: 58%
- Cost effectiveness: 47%
- Industry reputation: 38%
- Personal attention: 26%
- Quick turnaround time: 24%
- Integrated service offerings: 20%
- Foreign presence: 18%
- Diversity of team: 17%
- Approval by procurement: 12%
- Corporate culture: 8%

Note: respondents selected up to three answers.

Source: Globality. Rethinking professional services in an age of disruption, EIU 2018
What does ‘specialized knowledge and expertise’ mean?

**UP:SKILL**
Skills enhancement in current role

**RE:SKILL**
Skills enhancement for new role

Skills enhancement requires both a lift and a shift in competence
Hard + **Soft Skills**

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### Top 10 skills in 2020

1. Complex Problem Solving
2. Critical Thinking
3. Creativity
4. People Management
5. Coordinating with Others
6. Emotional Intelligence
7. Judgment and Decision Making
8. Service Orientation
9. Negotiation
10. Cognitive Flexibility


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**Soft skills will shape the workforce of the future**

Written by Armin Hopp on 30 October 2017

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**Why You Need Cultural Intelligence (And How To Develop It)**

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**Why soft skills are so important to the future of work**

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Cultural Intelligence

by P. Christopher Earley and Elaine Mosakowski
Higher Education is at a New Crossroads

- Digital society - Teaching and memorizing facts is irrelevant today

- Being able to learn, analyze, think critically and make an argument is what matters

- Working in teams and with other people, across disciplines is an important skill.

- Management of knowledge and technology
### Four dimensions - 12 Key Skills for the Digital Transformation*

<table>
<thead>
<tr>
<th>Self</th>
<th></th>
<th>Context</th>
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<tbody>
<tr>
<td>Learning Agility (LA)</td>
<td>Time Management (TM)</td>
<td>Adaptability and Resilience (AR)</td>
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<td>Emotional Intelligence (EI)</td>
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<td>Contextual Intelligence (CL)</td>
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<td>Uncertainty Management (UM)</td>
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</tbody>
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#### Others
- Empathy (EM)
- Communications and Networking (CN)
- Cultural Intelligence (CI)

#### Process
- Planning and Executing (PE)
- Sensemaking (SM)
- Storytelling (ST)

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*Dr. Marco Serrato - Tecnológico de Monterrey (2018)*
How? - Higher education is under a profound disruption

De-Know-Polization: The End of the University’s Monopoly of Knowledge
Guest author: Yesha Sivan

Will Alternative Credentials Replace College Degrees?

Time To End The Monopoly In Education

By Andrew J. Coulson

Expanding higher education

Time to end the academic arms race

School-leavers need other ways to learn and train besides going to university

No college, no problem?

For many employers and candidates, skills matter more than degrees

End of the university monopoly: credentials

“Increased emphasis on certificates or badges obtained from online courses or workshops, even for university graduates.”

“Employers will place more value on on-the-job learning such as work placements and on demand continuing education in the workplace. Portfolios are becoming more important than CVs.”

The Future of Jobs and Jobs Training, Future Research Center
Lifelong learning becomes crucial*

The Continuing Education landscape is changing – *new players and value propositions*
Summary
Skills Requirements for the Digital Transformation

Focus on target audiences – Individuals & Organizations

Learning Solutions that take advantage of new context & technologies (lifelong and lifewide learning)

Develop our own talent - Capability Roadmap

Meaningful and Personalized Programs and Learning Experiences

Global, Regional and Local Focus
Calvin & Hobbes' wisdom - again

Explorers are we, intrepid and bold,
Out in the wild, amongst wonders untold.
Equipped with our wits, a map, and a snack,
We're searching for fun and we're on the right track!

Our new role
Our values & culture
Context - VUCA
Skills!
The right resources
The most important one: the right attitude!
Thank you!

Setting the Scene:
Skills Requirements for the Digital Transformation

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