

Putting IT to Work

Mihael Buković
Vice-Dean for development and
economy

College for Information technologies

www.vsite.hr

**BUILDING BRIDGES FOR A MORE PROFESSIONAL HIGHER EDUCATION
OTOČEC (SLOVENIA), 16-17 OCTOBER 2014**

Professional Study of Information Technology

- designing user software support,
- integration and maintenance of computer systems and networks,
- designing databases and web sites
- designing and use of information systems

Professional Graduate Study of Information Technology

- designing user software support and information systems
- integration and maintenance of computer systems and networks
- embedded and mobile computers

Putting IT to Work for 'four purposes' of higher education

- The world is broken. Business doesn't work anymore. Across the S&P 500, return on assets is headed toward zero
- the deficit goes to unthinkable heights

The Power of Pull by John Hagel, JSB and Lang Davison
http://www.deloitte.com/view/en_US/us/Industries/Technology/8dfff75d99efd110VgnVCM100000ba42f00aRCRD.htm

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- **push economy** that powered the world is impossible for:
 - any future revival of the mass production,
 - centralized, top down economy-of-scale,
 - version of the petroleum fueled and
 - assembly line based economy

The Power of Pull
by John Hagel, JSB and Lang Davison

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The power of pull puts each of us, individually and together, in a position to collaborate in a complete re-imagination of our biggest private-and public-sector institutions, one that may eventually remake society as a wholes

The Power of Pull
by John Hagel, JSB and Lang Davison

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- **How Small Moves Smartly Made Can Set Big Things in Motion.**
- J. Hagel call it the Big Shift between the 20th-century push economy to the 21st Century pull economy

John Hagel III, John Seely Brown and Lang Davison

2010 COOK NETWORK CONSULTANTS 431 GREENWAY AVE. EWING, NJ 08618-2711 USA

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Thriving in the World of Flux



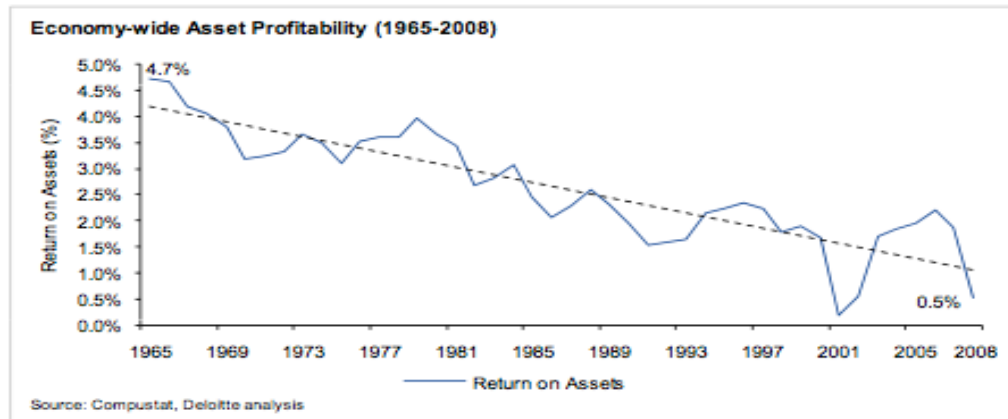
The Big Shift:

20th C. Push Economy => 21st C. Pull Economy

In the new era of constant flux:
a great time for entrepreneurs

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The return on assets (ROA) for U.S. firms has steadily fallen to almost one-quarter of 1965 levels



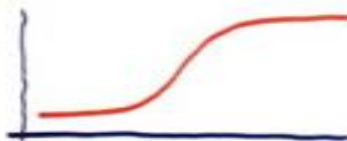
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20th Century Era Captured by Alfred Chandler
Push Economy



20th century infrastructure
roads/cars/trucks/trains/ships/airplanes

Scalable Efficiency becomes the goal.

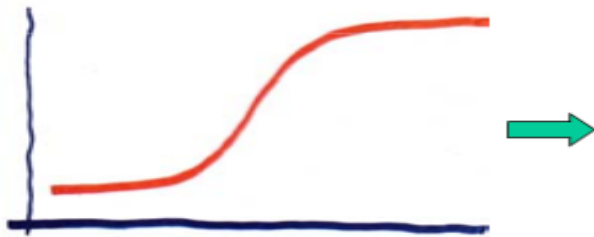


S-curve
stable over decades.
(Few real changes in 60 years)

- predictable
- hierarchy
- control
- organizational routines
- minimize variance

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But the 21st C infrastructure driven by the continual exponential advances of computation, storage & bandwidth, with no stability in sight!!



S-curve



rapid set of punctuated moves
(potentially never ending)

infrastructure is tech + institutional arrangements &
work and social practices

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in a world of increasingly rapid change,
the half life of a given stock/skill is
constantly shrinking

& the predictability of future needs is
increasingly less certain!

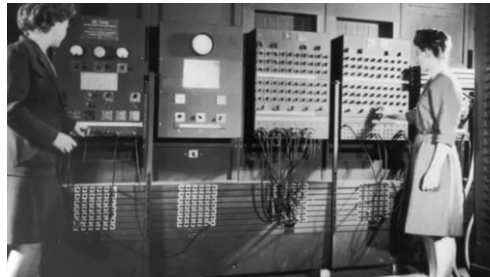
Stocks =====> **Flows**

protecting knowledge assets	participating in knowledge flows
<u>sharing knowledge</u> (explicit)	<u>creating new knowledge</u> (strong tacit component)

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What has changed: Hardware –
Carl Bass- CEO AUTODESK 'The Future of How Things are Made' - Solid 2014
https://www.youtube.com/watch?v=eAfVF1ne_1M

from

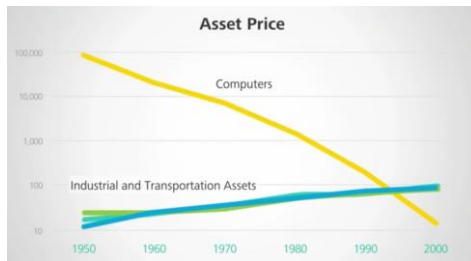


to



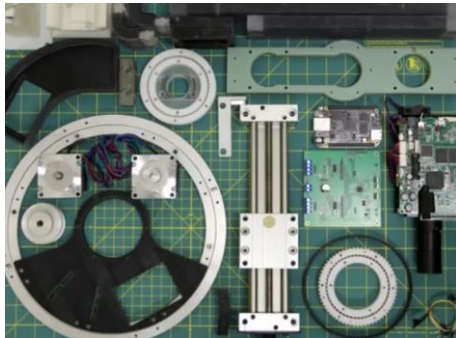
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What has changed: Hardware



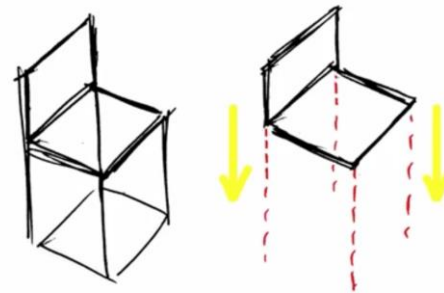
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What has changed: Hardware



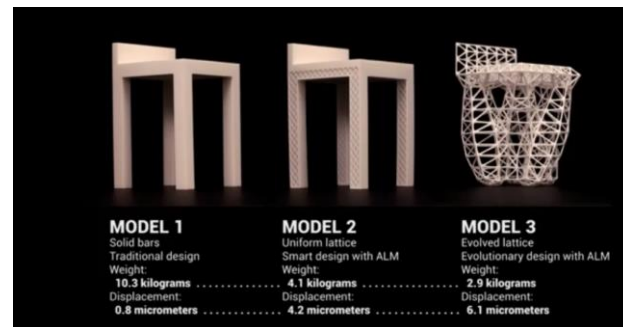
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What has changed: Software



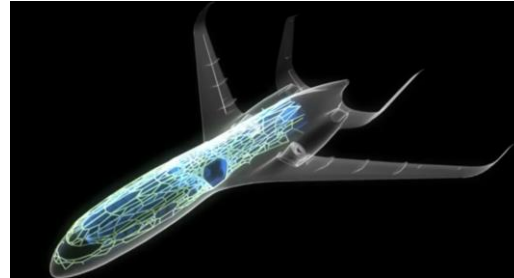
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What has changed: Software



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What has changed:
Hardware and Software are putting work towards
products for PULL economy – no scalability, flow
of information, cooperation, innovation and
creativity



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What has changed:
Hardware and Software
are putting work
towards digital
production.

With 3D printing digital
production
is achievable.



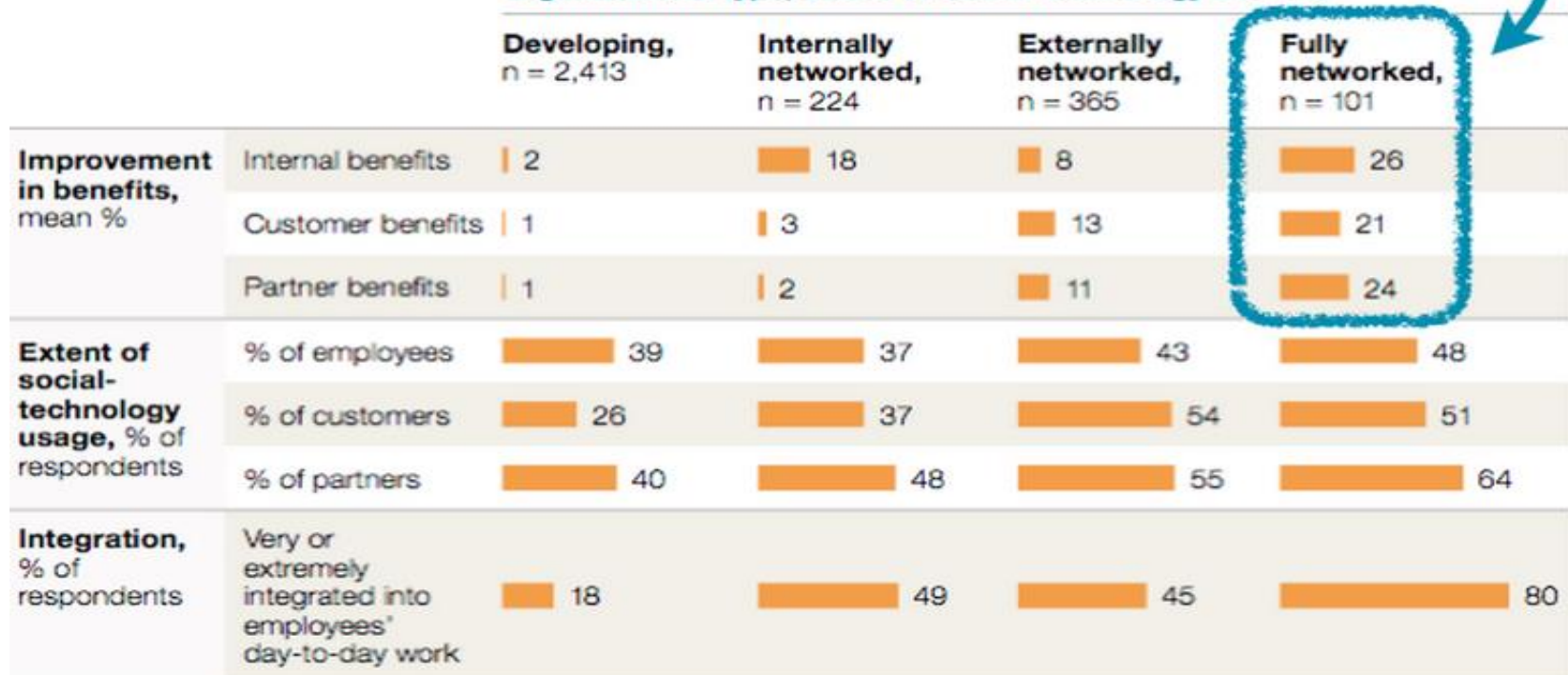
IT - preparation for sustainable employment

- We need new ideas, new frameworks but also new pathways in - into the minds and action spaces
- How much will IT really help ?
- Vsite experience – one student one PC



Organizations That Fully Network their Ecosystem Inside and Outside See Significantly Higher Benefits

Organizational type, based on social-technology benefits



Source: 2011 McKinsey Web 2.0 Survey

IT - preparation for sustainable employment

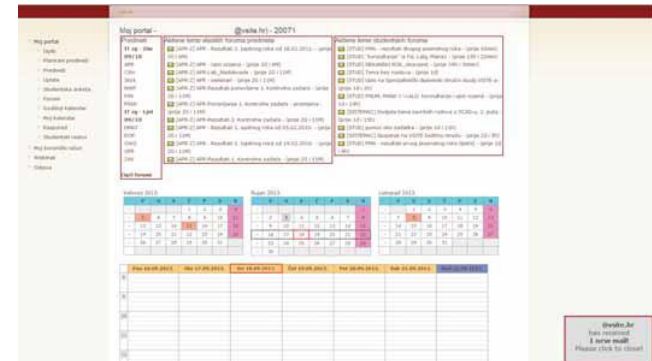
SCAD – School Administration - VsITe has developed its own software solution for monitoring of all college activities. After several years of development, today the solution has over 20 modules important for the sustainability of the school.

The Student Administration module with segments for the entrance exam, enrollment, and the initial database of each student.

The Teachers' Module contains all the information about teachers, their election, their works, and their monitoring the courses that they teach.

The Courses Module with syllabi in Croatian and English, as initially entered including the modifications made during the academic year.

The Teaching Module includes data entries from lectures, auditory and laboratory exercises, as well as quizzes and exams.



IT - preparation for sustainable employment

VSITE has introduced a quality management system in accordance with the

international standard ISO 9001:2008 and the

Standards and Guidelines for Quality Assurance in the European Higher Education Area.

IT - preparation for sustainable employment

- Workshops for:
- 3D printing
- Cloud technology
OpenNebula
- IoT Internet of things



IT - preparation for sustainable employment

VSITE organizes workshops that enable students to acquire additional knowledge and practical experience which full-time study programs do not provide.

Workshops have proved to be an opportunity for accomplishing students' project ideas and a place where they are directed towards innovation and application of new information technologies.

Such practical training enables fast integration into the labor market, increases the chances of (self-) employment and the transformation of their innovations into viable technical and business solutions.

IT and personal development

Mission is to educate and train students for a successful and comprehensive application of information technology for the benefit of the economy and society as a whole.

Focus is continuous improvement of the quality of the educational process, which includes meeting the students' needs in terms of excellence and competence.

IT - creating a broad advanced knowledge base and stimulating research and innovation

The VSITE Innovation and Development Center (IRC) encourages professional and scientific research and innovation from teachers and students in applying new information technologies that contribute to economic and social development and to overall knowledge and technical development.

IT - creating a broad advanced knowledge base and stimulating research and innovation

Cooperation Agreements With Renowned Companies

The purpose of agreements with renowned companies is to familiarize the school and its students with the issues in implementing IT facilities into the economy, to include the economy into the process of educational process in the field of IT technologies and into VSITE's professional and scientific projects involving implementing cutting edge IT technologies into the economy. This is achieved through joint actions and projects.

IT - The expected result of RDI

The big shift

from 20th C. Push Economy
to 21st C. Pull economy

Set up our minds towards learning
outcomes harmonized with pull
economy

Shift from know what to know how