LIBRARIES AND SUSTAINABLE DEVELOPMENT IN ACTION

2016-05-09
Birštonas
I. GLOBAL RISKS & SMART CITIES
# GLOBAL RISKS

**Global Risks Perception Survey 2014, World Economic Forum**

<table>
<thead>
<tr>
<th>Risk Category</th>
<th>Risks</th>
<th>Risk Level</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Economic Risks</strong></td>
<td>Failure of financial mechanism or institution</td>
<td>23.8%</td>
</tr>
<tr>
<td></td>
<td>Unmanageable inflation</td>
<td>10.9%</td>
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<tr>
<td></td>
<td>Fiscal crises</td>
<td>10.9%</td>
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<tr>
<td></td>
<td>Energy price shock</td>
<td>8.6%</td>
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<tr>
<td></td>
<td>Asset bubble</td>
<td>5.1%</td>
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<tr>
<td></td>
<td>Deflation</td>
<td>5.1%</td>
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<tr>
<td></td>
<td>Unemployment or underemployment</td>
<td>5.1%</td>
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<tr>
<td></td>
<td>Failure of critical infrastructure</td>
<td>5.1%</td>
</tr>
<tr>
<td><strong>Geopolitical Risks</strong></td>
<td>Terrorist attacks</td>
<td>13.0%</td>
</tr>
<tr>
<td></td>
<td>Weapons of mass destruction</td>
<td>2.8%</td>
</tr>
<tr>
<td></td>
<td>Failure of national governance</td>
<td>2.8%</td>
</tr>
<tr>
<td></td>
<td>State collapse or crisis</td>
<td>2.1%</td>
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<td></td>
<td>Interstate conflict</td>
<td>2.1%</td>
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<tr>
<td><strong>Societal Risks</strong></td>
<td>Spread of infectious diseases</td>
<td>20.0%</td>
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<tr>
<td></td>
<td>Food crises</td>
<td>11.3%</td>
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<tr>
<td></td>
<td>Failure of urban planning</td>
<td>6.2%</td>
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<tr>
<td></td>
<td>Water crises</td>
<td>5.5%</td>
</tr>
<tr>
<td></td>
<td>Profound social inequality</td>
<td>3.9%</td>
</tr>
<tr>
<td></td>
<td>Large-scale involuntary migration</td>
<td>5.5%</td>
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<tr>
<td><strong>Technological Risks</strong></td>
<td>Critical information infrastructure breakdown</td>
<td>10.6%</td>
</tr>
<tr>
<td></td>
<td>Cyber attacks</td>
<td>6.7%</td>
</tr>
<tr>
<td></td>
<td>Data fraud or theft</td>
<td>6.7%</td>
</tr>
<tr>
<td></td>
<td>Misuse of technologies</td>
<td>4.1%</td>
</tr>
<tr>
<td><strong>Environmental Risks</strong></td>
<td>Failure of climate-change adaptation</td>
<td>0.3%</td>
</tr>
<tr>
<td></td>
<td>Man-made environmental catastrophes</td>
<td>0.3%</td>
</tr>
<tr>
<td></td>
<td>Biodiversity loss and ecosystem collapse</td>
<td>4.0%</td>
</tr>
<tr>
<td></td>
<td>Natural catastrophes</td>
<td>3.5%</td>
</tr>
<tr>
<td></td>
<td>Extreme weather events</td>
<td>3.8%</td>
</tr>
</tbody>
</table>
GLOBAL RISKS

Source: Global Risks Perception Survey 2014, World Economic Forum
The Risks-Trends Interconnections Map 2016
How are global trends connected to global risks?

VIRTUOUS CYCLE OF THE DIGITAL ECONOMY

Source: ECA Digital Agenda for Europe, 2010
SMART CITY MODEL

- Equipment management
- Operational information
- Analysis and simulation

Urban management infrastructure

Data center

- Water
- Industrial wastewater treatment
- Sewage treatment

- Energy
- New energy
- Gas
- Large central power source

- IT

IT

- Mobility
- Shipping
- Railways
- Roads

- Communications
- Broadcasting
- Telephony

- Agriculture, fisheries
- Logistics

- Tourism, leisure
- Research, university
- Study
FROM SMART CITY TO SMART NATION

Source: Adapted from Palmisano, 2008
SMART CITIES: FROM DATA TO INTELLIGENCE

**Instrumentation**
Collect (a lot of) data.
- Sensors (examples: traffic, water, energy)
- Systems (example: building automation)
- Satellites (example: weather patterns)
- Society (example: social media)

**Integration**
Connect and bring these data together from across the city.
- "Internet of things" Ubiquitous connectivity
- Smart grid

**Intelligence**
Analyze integrated data for insights and trends to make smarter decisions.
- Big data analytics
- Predictive analytics
- Data-driven optimization

Source: Adapted from Palmisano, 2008
II. LIBRARIES SUSTAINABILITY DILEMMA
PERSPECTIVES OF THE TITANIC: ARE WE SINKING WITH THE SHIP?

Source: http://g3.dcdn.lt/images/pix/titanikas-titanic-63723068.jpg
LIBRARIES FACING 'GREATEST CRISIS' IN THEIR HISTORY

Nearly 350 libraries have closed in UK over past six years, causing loss of almost 8,000 jobs, according to new analysis

OUR CHANGING CONTEXT

“We preserve the intellectual memory of the nation, we are a major player in the research ecosystem, we support economic growth”.

Dame Lynne Brindley
The British Library Chief Executive
THE KNOWLEDGE BALANCE OF THE AUSTRIAN NATIONAL LIBRARY

POSITIONING

Intellectual potential

Future strategy
- National
- International

Human potential
- Structural potential
- Relationship potential

Services

Cultural memory
- Research and development
- Demoscriptation of knowledge
- Cultural and educational programs
- Information literacy/competency

Effects

Source: According Österreichische nationalbibliothel, 2015
THE ESSENCE OF LIBRARIES ACTIVITIES

Vision of Lithuanian Library System – the exclusive unit of documentary and digital State’s cultural and scientific heritage and use of intellectual institutions, substantially contributing to Lithuanian national progress in the knowledge society and the acceleration of international competitiveness.
Source: Global Risks Perception Survey 2014, World Economic Forum
THE ORGANIZATIONAL STRUCTURE OF LNB INFLUENCE NETWORK

- Alliances with subcontractors
- Boundary of LNB
- Customer response cluster
- Alliances with a major customer
- Centre of competence in manufacturing
- Alliance with a competitor
- Integrated competence cluster
- Cross-functional team
According Leibold M., Probst G.J. B., Gibbert M., 2002

STRATEGY – KNOWLEDGE GAP

What library and network must know

What library and network knows

Knowledge Gap

What library and network can do

What library and network must do

Strategic Gap

What library and network must know
Digital competence is the set of knowledge, skills, attitudes, strategies, values and awareness that are required when using ICT and digital media to perform tasks; solve problems; communicate; manage information; collaborate; create and share content; and build knowledge effectively, efficiently, appropriately, critically, creatively, autonomously, flexibly, ethically, reflectively for work, leisure, participation, learning, socialising, consuming & empowerment.

Source: Ferrari, 2012
LEADERSHIP COMPETENCIES JOURNEY

Source: Kelner and Patrick, 2010
WEB SCIENCE & HUMAN-COMPUTER INTERACTION

Source: Association for Computing Machinery Interactions, 2013
THE EMERGING BIG DATA STACK

Source: Forrester, 2014
H2020 AND THE INTELLECTUAL DIGITAL LIBRARY
THE MAIN LIBRARY ACTIVITIES ELEMENTS FOR THE FUTURE

Knowledge and study center
*Highlights: Information and Knowledge Management*

Public Intelligence Center
*Highlights: The essence and mission*

Functioning center
*Highlights: Information Analytics*

Development center
*Highlights: Create models for the learning organizations*

Source - Mitrov, Mason, Pearson, 1994
FIVE ELEMENTS OF SUSTAINABILITY
THE WHEEL OF CHANGE TOWARD SUSTAINABILITY

Change the dominant mind-set (establish compelling need)

Rearrange the parts of the system (organise teams)

Adjust the parameters (alter policies and procedures)

Correct the feedback loops (improve learning and motivation)

Shift the flows of information (continual communication)

Restructure the rules of engagement (create new strategies)

Alter the goals of the system (adopt visions and principles)
STANDARDIZED INDIRECT EFFECTS

- Deliberate Planning
- Planning Capability
- Emergent Strategy
- Innovation Orientation
- Market Success

Source: Joe Tidd, 2012
THEORETICAL MODEL FOR LIBRARIES

- Risk taking
- Creativity

- Perf. management
- Formalisation

Long-term organisational focus

Competence exploration

Innovation ambidexterity

Competence exploitation

Short-term organisational focus

Source: Joe Tidd, 2012
III. BLUE OCEAN STRATEGY (BOS) IN THE CONTEXT OF SUSTAINABLE LIBRARIES
BACKGROUND – INNOVATION AND STRATEGIC ADVANTAGE

• Libraries need to be prepared for innovation;
• Library Managers need to share an understanding of the nature of innovations;
• Libraries need to develop a strategic portfolio of innovations projects;
• Central is the question of knowledge, particularly in terms of technologies, products, markets, etc. And the way in which Libraries can mobilise this knowledge to create advantage through innovations.

According Joe Tidd, 2012
“Value innovation requires companies to orient the whole system toward achieving a leap in value for both buyers and themselves.”

W. Chan Kim
STRATEGIC INNOVATION

Source: Kim & Mauborgne, 2005
STRATEGIC INNOVATION HELPS YOU TO CREATE NEW MARKET SPACE BY:

• Looking beyond the established boundaries and conditions within your industry to invent new strategic growth options;

• Understanding your competitors but not letting them set your strategic agenda;

• Understanding non-customers and discovering how to turn them into customers;

• Not letting your existing capabilities limit your pursuit of value creation;

• Breaking the low cost vs. differentiation trade-off that traditional strategy methods stipulate.

According Kim & Mauborgne, 2005
THE MIND MAP LOOKS AT THE CONCEPT OF BLUE OCEAN STRATEGY/INNOVATION

Source: according to Kim & Mauborgne, 2005
## RED OCEAN VS. BLUE OCEAN STRATEGY

<table>
<thead>
<tr>
<th>Red Ocean Strategy</th>
<th>Blue Ocean Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compete in <strong>existing</strong> market space.</td>
<td>Create uncontested market space.</td>
</tr>
<tr>
<td><strong>Beat</strong> the competition.</td>
<td>Make the competition irrelevant.</td>
</tr>
<tr>
<td>Exploit <strong>existing</strong> demand.</td>
<td>Create and capture <strong>new</strong> demand.</td>
</tr>
<tr>
<td><strong>Make</strong> the value-cost trade-off.</td>
<td><strong>Break</strong> the value-cost trade-off.</td>
</tr>
<tr>
<td>Align the whole system of a firm’s activities with its <strong>strategic choice of differentiation</strong> or <strong>low cost</strong>.</td>
<td>Align the whole system of a firm’s activities in <strong>pursuit of differentiation and low cost</strong>.</td>
</tr>
</tbody>
</table>

Source: Kim & Mauborgne, 2005
BLUE OCEAN STRATEGY

High Performance Strategic move

High Performance Leadership

High Performance Management process

Value Innovation

Tipping Point Leadership

Fair Process

Using Value Innovation we simultaneously lower costs while driving up customer value. We compliment your existing strategic orientation by expanding your thinking from:

- customers to noncustomers
- competition to alternatives

Using Tipping Point Leadership we mobilise teams to achieve high performance when time, money and motivation are scarce.

Using Fair Process and its three E principles we help you turn compliance into commitment.

- Engagement: involving individuals in strategic decisions
- Explanation: gaining understanding of why final strategic decisions are made.
- Expectation: communicating clearly the new rules.

Source: Kim & Mauborgne, 2005
# BLUE OCEAN STRATEGY PRINCIPLES

**Strategy Formulation**

<table>
<thead>
<tr>
<th>6 Paths Approach</th>
<th>Strategic Planning</th>
<th>Market Sizing</th>
<th>Business Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reconstruct Market Boundaries</td>
<td>Focus on Big Picture – Not Numbers</td>
<td>Reach Beyond Existing Demand</td>
<td>Getting the strategic Sequence Right</td>
</tr>
</tbody>
</table>

- **Search Risks**
  - Alternative Industries
  - Strategic groups
  - Buyer Groups
  - Complementary Product offerings
  - Functional Emotional Orientation
  - Time

- **Planning Risks**
  - Use visualization to plan beyond incremental changes
  - Visual Awakening
  - Visual Exploitation
  - Strategy Fair
  - Visual Communication
  - Pioneer, Migrator, Settler Map

- **Scale Risks**
  - Challenge Conventional practices
  - Consolidate demand by focusing on Non Customers
  - Three tiers of Non Customers

- **Business Model Risks**
  - Sequence the business Model to capture newly created value
  - Buyer Utility Mapping
  - Pricing & corridors of Masses
  - Cost Targets based on margins desired
  - Potential Adoption obstacles

**Strategy Execution**

<table>
<thead>
<tr>
<th>Business Model Risks</th>
<th>Mobilization</th>
<th>Management Risks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overcoming Organizational hurdles</td>
<td>Tipping Point leadership to Tackle</td>
<td>Execution through: Engagement</td>
</tr>
<tr>
<td>Building Execution into Strategy</td>
<td>• Cognitive hurdles</td>
<td>• Explanation</td>
</tr>
<tr>
<td></td>
<td>• Resource Hurdles</td>
<td>• Clarity of expectations</td>
</tr>
</tbody>
</table>

Source: Alto, 2013
According Kim & Mauborgne, 2005
PREDICTIVE INNOVATION IDEA PROCESS

1. Identify Actors
2. List Desires
3. Translate Desires into Outcomes
4. Diagram Functions
5. Expand Elements
6. Multiply Alternatives

Source: Mark Proffitt, 2011
MIND MAP OF BOS

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**Source:** Kim & Mauborgne, 2005
CONCLUSIONS (I)

In the future libraries will:

- **Guarantee access** for future generations;
- **Enable access** to everyone who wants to do research;
- **Support research communities** in key areas for social and economic benefit;
- **Enrich the cultural life** of the nations;
- **Lead and collaborate** in growing the world’s knowledge base.

Source: Research Infrastructures in the Digital Humanities, 2011
CONCLUSIONS (II)

• People will continue to use the library as an interactive research space;

• Libraries will need to continue to demonstrate their value;

• **Consolidation** of print collections, cloud repositories of content, automated preservation and infrastructure will be more common;

• Libraries will be **interoperable**;
CONCLUSIONS (III)

• To be sustainable for libraries is to meet the needs of today's society in a way that doesn't harm the ability of future generations to meet their needs.

• Through libraries network of services, information on research and innovation is made available to advance sustainable development and the welfare of peoples worldwide.
THANK YOU FOR YOUR ATTENTION

2016-05-09
Birštonas