Value Creation: Innovation and Globalization; 
the economic challenges and their impacts on higher education 
and skills development

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Innovation and the Roles of Higher Education

Knowledge Cycle

- New Technologies / Knowledge
  - Acquire
  - Assimilate
  - Create
  - Discover
  - Develop values
  - Understand business challenges

Disseminating knowledge

Creating new knowledge

Application of knowledge

“Business schools need to have a two-track faculty, with the second track being a clinical faculty, that is, ...those who would bring into the classroom the world of practice and experience”. JEFFREY E. GARTEN (former YSM dean)
Globalization: look for where the best is in a flattened world.

**International**
- HQ in one country
- Sell in many
- Export/Import

**Multinational**
- Replicate operations in many countries (HQ, R&D, Manu, etc.)

**Globally Integrated**
- Draw on global skills and global delivery.
- Tasks performed in one location for customers in many

**19th C**

**20th C**

**21st C**
Services Science and Engineering: Value Creation

HOW VALUES ARE CREATED
Services focus on creating Utility Value or Perceived Value for a product/asset. They are in contrast with Engineering which focuses on Cost and Quality.

Value from enhancing the capabilities of things (customizing, distributing, etc.) and interactions between things.

Product-focused vs. Client-focused

Intrinsic vs. Client perceived

Product / Asset Values
Route to Market: Servitization vs Productization

- **GIE**
  - **Globalization**
  - **Mass Customization**

**Servitization**
- **Products** → **Services** → **Clients**

- **Residues of common assets** → **Reusable assets**

**Productization**
- **Services** → **Clients** → **Products**

**Business or Societal Challenges**
- Mass Customization
- Globalization
- GIE
Economic Evolution: Servitization and Productization

- Products
- Services
- Client’s needs
- Service complexity
- Product complexity

Develop values
Assimilate
Acquire
Create
Understand

business challenges

Technical Vitality
Economic Evolution: Servitization and Productization

Products
Services

sophistication
The Globally Integrated Enterprise

- Extends reach into local markets
- Reallocates works to meet talents
- Optimizes and integrates key operations
- Eliminates redundancies and excess overhead
- Leverages capability wherever it is located
# Value Creation: Value Matrix

Where Innovation and Globalization can target?
Can Value Creation be measured?
Where values should show up?

<table>
<thead>
<tr>
<th>Values</th>
<th>Revenue Growth</th>
<th>Market Share</th>
<th>Profit</th>
<th>Productivity</th>
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<tbody>
<tr>
<td>Challenges</td>
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<td>Customers</td>
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<tr>
<td>Products/Services</td>
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<td>Market/Competition</td>
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<td>Operations/Processes /Resources</td>
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<tr>
<td>Business Integrity</td>
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</tbody>
</table>

- **Customer Intimacy**
- **Products/Services Leadership**
- **Market Dominance**
- **Operations Excellence**
- **Regulation Compliance**
**Value Creation**

SHAREHOLDER’S VALUE

Ultimate Objective

Fundamental Indicators (KPIs)

MARKET DOMINANCE

Business Expectation

REGULATION COMPLIANCE

Government /Society Expectation

CUSTOMER INTIMACY

PRODUCTS & SERVICES LEADERSHIP

OPERATIONS EXCELLENCE

Value Creation Pyramid

Cost | Quality | Utility | Perception

**Value Creation**

**Ultimate Objective**

**Fundamental Indicators (KPIs)**

**Business Expectation**

**Government /Society Expectation**
Example: Become a globally integrated enterprise to tap the power of globalization to deliver unique value in an open collaborative ecosystem

- Lower the center of gravity
- Improve cost and effectiveness by moving work to where it can best be performed
- Focus IBM’s resources where we create the greatest value and excel in business collaboration

Case Study: IBM has integrated global operations and sustains trust in a distributed environment by lowering the center of gravity
The 21st Century Demands Uniquely Skilled People

• Cross-disciplinary programs and degrees

• Fusing technical competency with industry-specific knowledge and business-process expertise

• Success requires open collaboration among academia, government and industry to transform how the pipeline of future skills is built
Innovation Ecosystem

Challenges:
• Society
• Business

Constraints:
• Processes
• Infrastructures
• Human Capacity
• Funding
• Resources

Achievable goals:
• Innovation
• Research outputs

Stakeholders:
• Government
• Industry/Businesses
• Universities

Governance
Business Integrity

Market Products Services

Pertinence Impact

Quality Sustainability
Innovation and Globalization: Critical Success Factors

Innovation: Value Creation through Inventiveness and Newness
- Quality
- Pertinence
  - Impact
- Sustainability

Globalization: Value Creation through Improved Productivity/Affordability/Marketability
- High Valued Skills
- Fruitful Collaboration
  - Intellectual Capital Sustainability
  - Trust
- Seamless Integration

Knowledge Cycle
- Acquire
- Assimilate
- Create Discover
- Understand business challenges
- Develop values Innovations

Globally Integrated Enterprise

Society/Businesses
Impacts on Higher Education

Faculty perspectives:
- Standing out among the out-standings
  - Patents
  - Publications
- Pushing the frontier of innovation and relevancy
  - Government/industry Partnership
    - Practicality
    - Alignment with government/industry strategic objectives
- Committing to change
  - Continual learning

Student Perspectives:
- Hitting the ground running
  - Employability
  - Knowledge
  - Experiences
  - Insight
    - Project based approach
- Preparing for innovation
  - Versatility: wider spectrum
    - Major
    - Minor
- Expecting the unexpected
  - Adaptability
    - Methodology
    - Framework

New Technologies / Knowledge
Acquire
Assimilate
Discover
Create
Develop values
Understand business challenges
Society/Businesses

Multi-disciplined and Collaborative

Innovations
About the speaker: Dr Diem Ho is Manager of University Relations for IBM Europe, Middle East and Africa (EMEA).

His mission is to build and manage relationships of mutual value for IBM and the academic community.

Diem’s past research interests covered many disciplines in Science, Technology and Finance/Economics. He has published widely in physics, mathematics, image processing, remote sensing, engineering, optimization and finance.

Last year he co-edited/authored a special issue of the *Computational Economics* on Stochastic Process and Data Analysis published by Springer.

In recent years, he has lectured intensively on Higher Education Reform and is a member of the peer review teams for the EFMD-EQUIS and EPAS accreditation programs and a member of the EPAS committee.

He is an associate editor of the journal of *Computational Economics* and is a member of the IBM Academy of Technology.

Before assuming his current position, he was an EMEA practice leader with the IBM Management Technologies Consulting Group, specializing in using Technologies to address Business Challenges in Banking and Finance sector.

Before joining IBM, Diem was a university professor and he continues to supervise PhD thesis to-date. Diem obtained two Master degrees and a PhD in Magnetospheric Physics at Stanford University, California.