Through the utilization of theoretical and practical applications, focusing on both the strategic and operational aspects that characterise Service configuration and management, this course deals with Service design, organization, management and performance measurement.

- Introduction to Services
- The classification of services
- Service Engineering & Operations
- Service Capacity
- Service Performance Measurement
Information

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Materials (on ILIAS)

- Slides
- Readings (mandatory)
- Further readings (optional)

EXAM: Written
Program

- May 04 (3h)- Introduction
- May 05 (2h)- Service classification models
- May 11 (5h)- Service capacity
- May 18 (5h)- Service Engineering
- May 25 (3h)- Service Operations
- May 26 (2h)- Service Operations – The ABB case
- June 08 (4h)- Service Performance Measurement
Exam

**Written**

- The written exam includes exercises and questions, based on all the Service Management program (theory and mandatory papers).
- The oral exam is taken only upon a specific request of the candidate, or in case of a written evaluation between 15 and 18.
- The oral exam will consist of a discussion on topics presented in this course.
Why services?

Gross value-added at basic prices, by branch of activity
Year 2007 Unit of measure: Million euro.
Why services?

% of GDP from services

[www.wikipedia.com, 2012]
“Any activity or benefit that one party can offer to another that is essentially intangible and does not result in the ownership of anything”

[Kotler, 1997]

“A service is an activity or series of activities of a more or less intangible nature that normally, but not necessarily, take place in interactions between the customer and the service employees and/or physical resources or goods and/or systems of the service provider, which are provided as solutions to customer problems”

[Grönroos, 1990]
Typical service industries

- Transport and distribution
- Telecommunication
- Hospitality/tourism
- Restaurant and food
- Mass media
- Healthcare/hospitals/pharmacy
- Information Technology
- Waste disposal
- Banking
- Insurance

- Financial services
- Legal services
- Marketing services
- Research & Development
- Government
- Administration
- Consulting
- Gambling / Entertainment
- Retail sales / Franchising
- Real estate
- Education
Service Taxonomy

[adapted from Bartolomeo et al., 2003]
The central notion of service

**Intangibility**
The result of a service is a process or an act

**Perishability**
Services can not be kept in stock

**Variability / Heterogeneity**
Services are not standardised.
The customer-providers interaction opens up possibilities of variation

**Simultaneity / Inseparability**
The realisation of a service implies the presence of provider as well as customer

**Intangibility**
The result of a service is a process or an act
Implications of Intangibility

- **Search qualities**
  Can be determined prior to purchase (such as colour, price, feel, smell)

- **Experience quality**
  Can be discerned after the purchase or during the consumption (taste)

- **Credence quality**
  Can be evaluated after the purchase or on the basis of an achieved skill

Marketing implications

“make tangible the intangible”
Implications of Intangibility

“make tangible the intangible”

Sight
Implications of Intangibility

“make tangible the intangible”  Sound

Abercrombie and Fitch™ uses loud upbeat music with a heavy bass and eliminates gaps between tracks, creating a youthful nightclub-like atmosphere in its teen focused clothing shops.
Implications of Intangibility

“make tangible the intangible”  Smell

The Smell and Taste Institute found in a study that 84% of respondents were more likely to buy a pair of Nike trainers in a scented room compared with a non-scented room.
Implications of Intangibility

“make tangible the intangible”  

Taste: Air France has brought a fresh, contemporary new touch to its gastronomic meal service, a bold and original menu elaborated by three famous Michelin-starred Chefs
Implications of Inseparability

Production and consumption happen at the same time

Direct interaction between service provider and customer

Services are human-relationship dependent

The customer has to be present where the service is provided

Services are place dependent

Implications of Perishability

Production and consumption happen at the same time

Supply and demand in service are dependent on capacity management
Implications of Variability

Sources of variability

- Service provider mood / skills
- Customer behaviour
- External factors

SERVICES PERFORMANCE
Depends on service variability

1. Adopt a strict service quality monitoring
2. Improve service process
3. Introduce a risk analysis
4. Work on employees skills and competences
## Services vs. goods

<table>
<thead>
<tr>
<th>SERVICES</th>
<th>GOODS</th>
</tr>
</thead>
<tbody>
<tr>
<td>An activity or process</td>
<td>A physical object</td>
</tr>
<tr>
<td>Intangible</td>
<td>Tangible</td>
</tr>
<tr>
<td>Simultaneous production and consumption</td>
<td>Separation of production and consumption</td>
</tr>
<tr>
<td>Customers participate in production</td>
<td>Customers do not participate in production</td>
</tr>
<tr>
<td>Heterogeneous</td>
<td>Homogeneous</td>
</tr>
<tr>
<td>Perishable: cannot be kept in stock</td>
<td>Can be kept in stock</td>
</tr>
</tbody>
</table>
Driving forces behind the growth of services

- The impact of income changes on buying behaviour
- Sociological and demographical changes
- The growing importance of producer services
- Technological developments
Driving forces behind the growth of services

The impact of income changes on buying behaviour

The rise of disposable incomes has boosted the demand for both social and personal services (leisure, private health care, hotels, etc.)
Driving forces behind the growth of services

Sociological and demographical changes

The traditional family is being replaced by the duel-income family. The family has to outsource many activities to service providers.

The increase in life expectancy, boosts demand for nursing homes, health care services and specialized travel agencies.

The increase of life complexity calls for the need of professional services like the legal advisers or the income tax consultants.
Driving forces behind the growth of services

The growing importance of producer services

- Goods provision
- Product-based organisations
- Integrated solutions
- Services (consulting, legal, accounting, R&D, transport, surveillance, cleaning) supporting complex organisation and business models
The new manufacturing context

Deregulation
Innovation of technology
Globalisation
Industrialisation of emerging economies
Fierce competitive pressure

To survive manufacturing firms can rarely remain as pure manufacturing firms ...

...they have to move beyond manufacturing and offer services and solutions, delivered through their products.
Servitization is the evolutionary phenomenon of the business model of a manufacturing company, moving from a product-centric perspective towards Product-Service Systems (PSSs), based on the provision of integrated bundles consisting of both physical goods and services.

No more Ford T
The servitization of manufacturing (by country)

[Neely et al., 2011]
Some successful examples

**XEROX**
FROM selling photocopiers...
...TO being a “document company”

**ICI-Nobel**
FROM producing explosives...
...TO providing “rock on the ground”

**Rolls Royce**
FROM selling aircraft engines...
...TO providing functionality (“Power by the hour”)

[The Economist, 2009]
What are the main reasons for offering product-support services?

- Customer loyalty: 84%
- Differentiation: 73%
- Support for the physical product: 55%
- Economic objectives: 48%
- Other: 4%

Percentage of respondents
The expected benefits

1. Economic rationale
   - Profitability of services
   - Stability of service revenues along the entire product lifecycle

2. Competitive rationale
   - Differentiation
   - Lock in customers and lock out competitors
   - New customer needs

3. Environmental rationale
   - Dematerialization (functional economy)

[Mathieu, 2001 (pp. 455-460)]
[Baines et al., 2009 (pp. 556-558)]
[Mont, 2002 (pp. 237-238)]
Economic rationale

NEW ORDERS / INSTALLED BASE

MARGINS PRODUCTS VS. SERVICES

<table>
<thead>
<tr>
<th>INDUSTRY</th>
<th>MARGIN IN OEM BUSINESS</th>
<th>MARGIN IN SERVICE</th>
<th>MARGIN LEVERAGE¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper Machines</td>
<td>1-3%</td>
<td>10-15%</td>
<td>5</td>
</tr>
<tr>
<td>Power Equipment</td>
<td>2-5%</td>
<td>15-20%</td>
<td>4</td>
</tr>
<tr>
<td>Metallurgy Equipment</td>
<td>-3 - +6%</td>
<td>15-20%</td>
<td>4</td>
</tr>
<tr>
<td>Rail Vehicles</td>
<td>3-6%</td>
<td>8-10%</td>
<td>2</td>
</tr>
<tr>
<td>Machine Tools</td>
<td>1-12%</td>
<td>5-15%</td>
<td>2</td>
</tr>
</tbody>
</table>

Note: ¹ Margin Leverage = Margin in Service / Margin in OEM Business
Source: Annual Reports, Expert Interviews, Monitor Analysis
The expected benefits

- Long-term maintenance
- Green maintenance
- Help Desk
- Sharing
Economic rationale

Revenue Mix

- Hardware & Financing: 27%
- Services: 53%
- Software: 20%

Revenue Stream

Approximately 28% of our revenue comes from equipment sales, from either lease arrangements that qualify as sales for accounting purposes, or outright cash sales.

The remaining 72% of our revenue, “Post sale and financing,” includes annuity-based revenue from maintenance, services, supplies, and financing, as well as revenue from rentals or operating lease arrangements.
Different Types of Value proposition

*Service sophistication*

- **On Demand Manufacturing**
  (e.g. takeover of production)

- **Services to Enhance Customer Productivity**
  (e.g. services to increase machine productivity)

- **Services to Enhance Availability**
  (e.g. SLA, Remote Services)

- **Consulting Services**
  (e.g. projection, financing, configuration)

- **Basic Services**
  (e.g. spare parts, maintenance, complaints, trainings)
Driving forces behind the growth of services

*Technological developments*
Servitization and technology

STRATEGY & CUSTOMER INTEGRATION
Technology opens up new business opportunities to manufacturers through the introduction of new business models characterised by a changed notion of asset ownership and management.

Ex: Car-sharing
Servitization and technology

STRATEGY & CUSTOMER INTEGRATION
Technology provides the opportunity to develop a better understanding of customer behaviours, easing the development of new Product-Service (PS) solutions.

Ex: Connection multi-channel
Servitization and technology

IMPROVEMENT OF SERVICE PROVISION PERFORMANCES

Provides better asset operating conditions, time in use, and location speeding up maintenance and repairs activities, improving equipment design and operation behaviour and reducing service delivery costs.

Ex: AUGMENTED REALITY

Ex: TELESERVICE
Servitization and technology

OPERATIONS AND SERVICE CHAIN MANAGEMENT

Boosts value creation because it requires the redesign and the standardization of operating processes.

Enables a comprehensive vertical and horizontal information sharing and coordination in all directions between department, divisions and network partners supporting the implementation of the PS strategy.
The future is... «SMART» & «Social»
Services = €?
References


