MANAGEMENT CENTER INNSBRUCK

SYSTEMS PLANNING

Life Cycle and Stakeholder Management

Class outline

MANAGEMENT CENTER INNSBRUCK

What to expect from this class?

- A description of the **system life cycle and its different phases**
- A quick look at **Total Cost of Ownership**
- An introduction to **stakeholder management**

Source: https://pixabay.com/en/checklist-check-list-marker-2077020/ by TeroVesalainen |CC0 Creative Commons

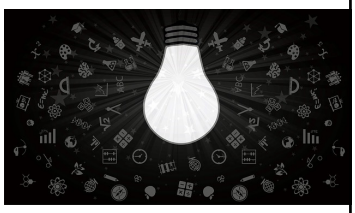
DIE UNTERNEHMERISCHE HOCHSCHULE®
MCI MANAGEMENT CENTER INNSBRUCK
6020 Innsbruck / Austria
Universitätsstraße 15
www.mci.edu
office@mci.edu

Class outline

MCI MANAGEMENT CENTER INNSBRUCK

What to take a away from this class?

- Know the different phases of the **system/software life cycle**
- Understand the term **Total Cost of Ownership**
- Know how to **deal with stakeholders**

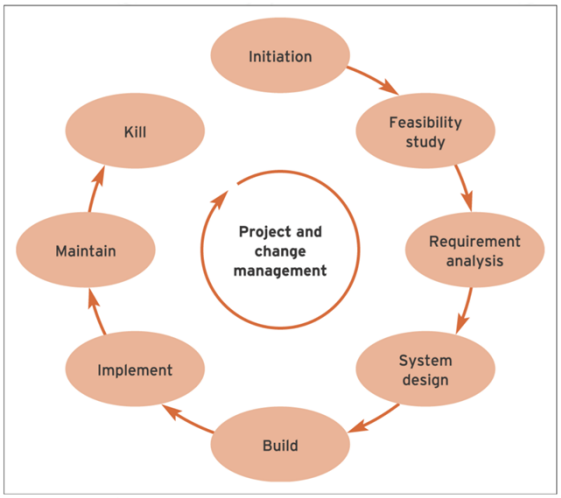


Source: https://pixabay.com/en/learning-hint-school-subject-3245792/ by harishs |CC0 Creative Commons

Life Cycle Management

MCI MANAGEMENT CENTER INNSBRUCK

The System Lifecycle



MANAGEMENT CENTER INNSBRUCK

The Initiation

- Grow a **stimulus** from a business perspective
- Prepare to **ensure** that the **project is successful**

- **Input**: creative thought and/or systematic evaluation of information system needs
- **Output**: idea for initiation of a new information system

Source: https://pixabay.com/en/germ-plant-seedling-live-nature-2871773/ by SarahRichterArt |CC0 Creative Commons

MANAGEMENT CENTER INNSBRUCK

The Feasibility Study

- Ensure the the project is a **viable business proposition** under **technical, economical** and/or **operational** aspects
- Analyze the need and consider **different alternatives**

- **Input**: idea for initiation of a new information system
- **Output**: feasibility report and recommendations to proceed.

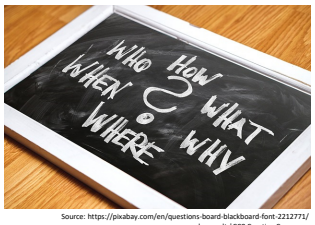
Source: https://pixabay.com/en/possible-impossible-opportunity-953169/ by gerait |CC0 Creative Commons

MANAGEMENT CENTER INNSBRUCK

The Requirements Analysis

- Capture **business requirements** from **talking to or observing end-users**
- Use **additional information** (e.g. existing documentation)
- **Define** what the system should do

- **Input**: output from the feasibility report
- **Output**: detailed requirements specification summarizing system functions, supported by **diagrams** showing the **information flow** and **processes** that are **required**.



Source: https://pixabay.com/en/questions-board-blackboard-font-2212771/ by geralt |CC0 Creative Commons

Life Cycle Management

MANAGEMENT CENTER INNSBRUCK

The System Design

- Define **how the system will work**
- Key areas: **user interface, program modules, security, database structure**, etc.

- **Input**: requirements specification
- **Output**: detailed design specification

Source: https://pixabay.com/en/door-accessibility-lock-doorway-1089560/ by neshom |CC0 Creative Commons

MANAGEMENT CENTER INNSBRUCK

The System Build

Programming
- Writing the code (programming)
- Building release versions
- Constructing and populating the databases
- (unit) testing by programmers and users
- Writing the documentation
- Training of users

- **Input**: requirements and design specification
- **Output**: working software, user guides and system documentation

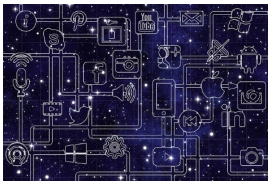
Source: https://pixabay.com/en/building-blocks-insert-2065238/ by 3dman_eu | CC0 Creative Commons

MANAGEMENT CENTER INNSBRUCK

The System Implementation (integration/change over)

Transition (integration/change over) from the old to the new system
- Make sure that hard- and software works (incl. network)
- Test the system
- Handle human aspects such as staff training

- **Input**: working system not entirely tested by end users
- **Output**: signed off, operational system



Source: https://pixabay.com/en/networks-internet-social-1987215/ by geralt | CC0 Creative Commons

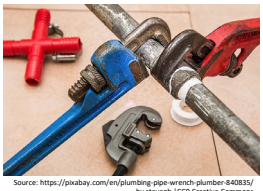
MANAGEMENT CENTER INNSBRUCK

System Maintenance

Provide required changes to the system

- Unproductive maintenance: correction of errors and oversight of original features
- Productive maintenance: additional feature that extend the functionality of the original system

- **Input**: working and tested system
- **Output**: system with errors corrected and additional features



Source: https://pixabay.com/en/plumbing-pipe-wrench-plumber-840835/ by stevepb |CC0 Creative Commons

MANAGEMENT CENTER INNSBRUCK

System Kill

Take the system out of production

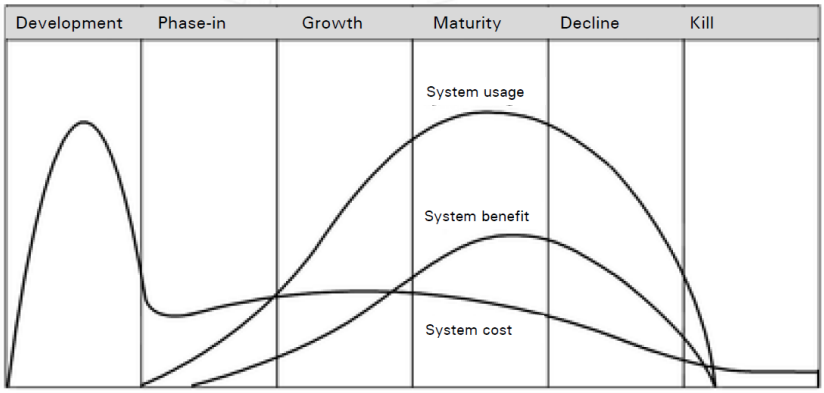
- Special emphasis is given to prepare the data for further usage

Source: https://pixabay.com/en/computers-the-power-of-technology-1762996/ by bartekhndd |CC0 Creative Commons

Life Cycle Management

MCI MANAGEMENT CENTER INNSBRUCK

Total Cost of Ownership (TCO)



Source: Heinrich, L. J. (2002). Informationsmanagement: Planung, Überwachung und Steuerung der Informationsinfrastruktur. 7. Auflage. München, Wien: Oldenbourg.

Stakeholder Management

MCI MANAGEMENT CENTER INNSBRUCK

Stakeholder Management

Manage socio-technical implications during the System Development Lifecycle:

- Develop a **strategic view** of the **human and institutional landscape**
- Develop an **awareness** of the **relationships** between the different stakeholders
- **Act accordingly**

Source: https://pixabay.com/en/play-stone-network-networked-1237457/ by geralt | CC0 Creative Commons

Stakeholder Management

MCI MANAGEMENT CENTER INNSBRUCK

Who are stakeholders?

Individuals or **organizations…**

- Who are **actively involved** in the project
- Whose **interests** may be **affected**

Source: https://pixabay.com/en/business-people-silhouette-teamwork-2089532/ by TeroVesalainen |CCO Creative Commons

Stakeholder Management

MCI MANAGEMENT CENTER INNSBRUCK

Stakeholder analysis

Identify…

- **Roles** and **interests** of each stakeholder
- **Expectations** of each stakeholder in the project
- **Benefits** stakeholders will bring to the table
- **Resources** they commit (not commit) to the project
- **Interests** that might conflict with the project
- **Key people** for information distribution
- **Groups** that should be encouraged to participate in different stages of the project

Source: https://pixabay.com/en/association-community-group-meeting-152746/ by OpenClipart-Vectors |CCO Creative Commons

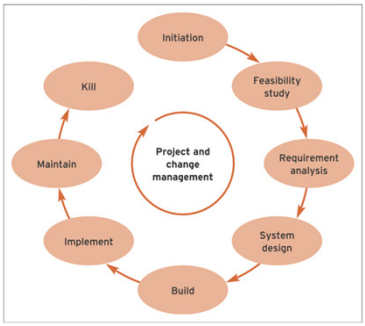
Stakeholder Management

MCI MANAGEMENT CENTER INNSBRUCK

Stakeholder analysis

When?

- **Can** be undertaken **throughout all stages** of the project lifecycle
- **Shall** be undertaken **at the beginning** of each project (note: stakeholders have great influence over the project in its early stages)
- **Decreases** as the **project evolves**



Stakeholder Management

MCI MANAGEMENT CENTER INNSBRUCK

Stakeholder analysis during…

Initiation phase:

- Helps **identify** and **address** key **stakeholders**

Feasibility and Requirements analysis phase:

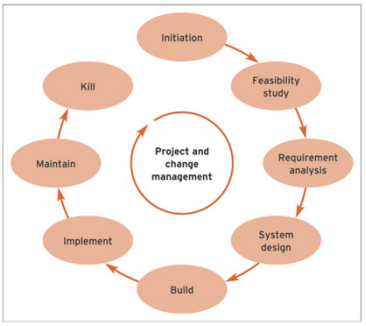
- Helps determine **strategic actions** and risks
- Helps with **communication planning** and prototyping

Build and Implementation phase:

- Helps **communicate** project progress

Maintenance phase:

- Provides a **baseline against** which projects can support and **evaluate** the **effectiveness** of their engagement



Stakeholder analysis

What does "Stakeholder Management" include?

- **Identify stakeholders** and their **interests**
- **Assess** power and **influence of stakeholders** in relation to the project
- **Identify risks** from stakeholders
- **Plan which stakeholders** will **participate** in the project cycle, **when** and **how**.
- Develop **strategies for strengthening** (**or weakening**) participation and stakeholder commitment

Source: https://pixabay.com/en/feedback-confirming-businessmen-2990424/ by geralt |CCO Creative Commons

Stakeholder analysis

Step 1: Identify Stakeholder

- **Brainstorm** who stakeholders are
- **Study organizational charts**, process models, use cases etc.
- Conduct **interviews** with known stakeholders
- Create a **stakeholder list**

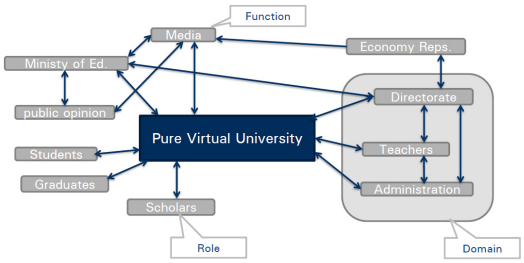
Source: https://pixabay.com/en/feedback-confirming-businessmen-2990424/ by geralt |CCO Creative Commons

MCI MANAGEMENT CENTER INNSBRUCK

Stakeholder analysis

Step 2: Create Stakeholder System Map

Visually lay out which stakeholders relate to the project and to each other (incl. roles, functions, departments, etc.)



MCI MANAGEMENT CENTER INNSBRUCK

Stakeholder analysis

Step 3: Create Stakeholder Analysis Table

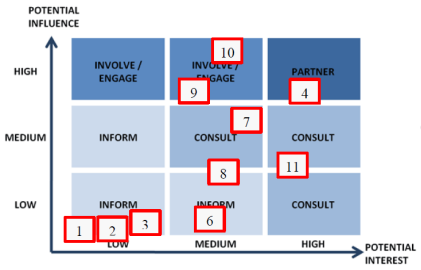
Assess the power and influence of stakeholders in relation to the project (incl. role, interest level, influence level, etc.)

Stakeholder	Role in Project	Interest Level (from ... to)	Influence Level
1. Scholars	Acquire needs	- ... ++	0
2. Students	Acquire needs	- ... +++	0
3. Graduates	Acquire needs	- ... +	+
4. Directorate	Decides	---- ... ++++	++++
5 Teachers	Live the idea	- ... ++++	++
6. Administration	Work the idea	- ... +	0
7. Economy Reps	Politics	---- ... ++++	+++
8. Social Reps	Politics	+ ... ++	+
9. Politics Elites	Politics	- ... +	+++
10. Ministry of Education	Decrees & finances	-- ... ++	++++
11. Media	"Inform" masses	-- ... ++++	++

Stakeholder analysis

Step 4: Create Stakeholder Analysis Grid

The **Stakeholder Analysis Table** can be **visualized graphically** giving hints for **managing relationships**



Note:
opposition to the project may be defined as **"negative potential interest"** on the X-axis

Stakeholder analysis

Step 4: Continued…

The **Stakeholder Analysis Grid indicates** how to **relate to the different stakeholders**:

- **High influence, interested people:**
  Fully **engage** them and make the **greatest efforts** to satisfy them
- **High influence, less interested people:**
  Put **enough work** in with these people to satisfy them, but not too much so that they do not become bored with your messages
- **Low influence, interested people:**
  Keep these people **adequately informed**, and talk to them to ensure that no major issues are arising. These people can often be very helpful with the details of your project. Involve them as Co-creators.
- **Low influence, less interested people:**
  Monitor these people, but do not bore them with excessive communication

Fin…

Source: https://pixabay.com/en/end-background-output-next-outlet-2042304/
by geralt | CC0 Creative Commons

… (end of content)

Summary

What you should have taken away from this class:

- The system life cycle consists of the **initiation**, **feasibility study**, **requirements analysis**, **system design**, **system build**, **system implementation**, **maintenance**, and finally **kill phase**.
- Initiation delivers first **creative thoughts**; the feasibility study **evaluates technical, economical, and operational aspects;** the requirements analysis **captures stakeholder needs**; system design deals with **interfaces, modules and database structures**; system building **writes code**; system implementation **brings things together**; maintenance **deals with errors and improvements**; and finally the system kill **takes the system out of production**.
- A **Total Cost of Ownership (TCO)** analysis shows **system usage**, **system benefit**, and **system cost**, an how these characteristics change over the course of a system life time.
- A stakeholder analysis identifies stakeholder **roles**, **expectations**, **benefits**, **resources**, **interests**, **key people** and **groups**.
- Tools used in stakeholder analysis include a **stakeholder system map**, a **stakeholder analysis table**, and a **stakeholder analysis grid**.

References

- Heinrich, L. J. (2002). Informationsmanagement: Planung, Überwachung und Steuerung der Informationsinfrastruktur. 7. Auflage. München, Wien: Oldenbourg.

Thank you for your attention!

mentoring the motivated.