BUSINESS-IT ALIGNMENT
A UNIVERSITY CASE STUDY

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Reasons for undertaking this study

Literature Review

Our approach

Case studies

Discussion
Overview

Definition

- The Business IT alignment exists when the goals of the organization are aligned in correspondence with business processes and systems that support them. [Thevenet 09]
Difficulties

- How can we represent the alignment between the strategic and operational level?

- What are the elements that will contribute to the construction of alignment?

- How can we solve the problem of conceptual diversity (goal, task, indicator, process, object ...)?

- What is the modeling tool that could represent the alignment in the different levels of abstraction?
Related Works (1/3)

Many studies have been developed to solve the problem of alignment:

- Zachman Framework for alignment documentation.[Zachman 03]
- Urbanization of Information System.[longépé 06]
- Modeling and construction of alignment between the environment, processes and the systems [Wegmann 05]
- Evaluation of the degree of alignment of the business process and Information system [Etien 06]
- ........

But very few studies integrated strategy in modeling of the alignment:

- Approach of modeling and construction of alignment oriented needs.[Bleistein 05]
- Approach of evaluation of the degree of alignment between the couple strategy of the enterprise and < Business process, information system> [Thevenet 08]
Related Works (2/3)

- [Bleistein 05]
  - No clear guide to construct the alignment.
  - Very few details for the construction of the alignment at the functional level.

- [Thevenet 09]
  - Very difficult to implement.
  - Uses the formalism of the map that does not cover all elements of the strategic level.

In all theses studies when strategy is taken into account in the alignment, it remains ambiguous and very difficult to adapt.
## Related Works (3/3)

### Comparison and evaluation of approaches

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</thead>
<tbody>
<tr>
<td>Construction of alignment</td>
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<td>Top-Down</td>
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<tr>
<td>Modeling tools</td>
<td>--</td>
<td>Artifact classification</td>
<td>---</td>
<td>Goals modeling</td>
<td>---</td>
<td>ontology</td>
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<td>card formalism</td>
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<tr>
<td>Details at the strategic level</td>
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<tr>
<td>Details at the functional level</td>
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</table>
Our approach (1/4)

(1) Strategic study

(2) Functional study

(3) Alignment study

Formalism properties of the organization

Enterprise strategy

Strategic level

Functional level
Our approach (2/4)

- **Strategic study**

  (1) In Our Approach we chose the formalism of I* for strategic modeling due to its flexibility and the possibility to be used in different contexts.

  ![Diagram showing soft goals and hard goals with tasks and target nodes]
Our approach (3/4)

- **Functional study**
  At the functional level we have been inspired by the approach of urbanization (enterprise architecture) for several reasons:
  1. In the context of urbanization, the functional view is generally deducted from the business view.
  2. Making the information system most reactive possible (i.e. able to evolve quickly to answer the new requests).
  3. Reorganizing the information systems in order to make them modular (via the blocks).

**Business Area**
**Alignment study:**

- The aim of this step is to establish the relation between the indicators with the neighborhood and blocks in functional level.

<table>
<thead>
<tr>
<th>Correspondance</th>
<th>Bloc 1</th>
<th>Bloc 2</th>
<th>Bloc 3</th>
<th>Bloc 4</th>
<th>Bloc 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicator 1</td>
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<td></td>
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<td>X</td>
<td></td>
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<tr>
<td>Indicator 2</td>
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<td>X</td>
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<td>Indicator 3</td>
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<tr>
<td>Indicator 4</td>
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<td></td>
<td>X</td>
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</table>
Case studies (1/4)

PROJECT OF THE MINISTRY OF HIGHER EDUCATION (MOROCCO)

Description:

The objectives of studied project are:

- To improve the internal output of higher education and the employability of the award-winnings who arrive on the job market.
- To offer to the students good conditions of training and lodging.

Some of the awaited results are:

- Creation of almost 124,000 places at the University;
- Multiplication by 2 of the capacity of reception of university.
- Registration of the 2/3 of all students of higher education in technical, scientific and professional options.
- Creation of almost 10,000 places in the university halls.
Case studies (2/4)

Strategic study

Development of a supply responsive Market
- Construction of new facilities
- Combinations of training centers for teachers at regional level
- Strengthening the role of orientation

Expansion of intake capacity of infrastructure
- Development of partnerships with relevant sectors
- Improve Mechanisms of coordination between different agencies involved

Providing with good learning conditions and accommodation
- Creating new channels
- Develop training convention
- Development of partnerships with relevant sectors
- Improve Mechanisms of coordination between different agencies involved
- Development of partnerships with relevant sectors
- Strengthen the Teacher Workforce
- Training for staff
- Increase the number of teachers

Impoving services
- Strengthening the Administrative Staff
- Combinations of training centers for teachers at regional level
- Multiplication by 2 of the capacity

10000 engineers and 3300 doctors per year
- Registration for 2/3 of students in technical option

Increase the number of teachers
- 1,5 million days of training

MENA 24-25 Nov
Case Studies (3/4)

Functional study

**Legend:**
- A_: Area
- N_: Neighbourhood
- B_: Bloc

**A_ Student Affairs**
- N_Registration
  - B_new students
  - B_registration

- N_Review & deliberation
  - B_review
  - B_deliberation

- N_Documents management
  - B_license
  - B_Master

**A_Human Resources**
- N_Human resource management
  - B_human resource management

- Q_Training
  - B_Training

**A_Library & archives**
- N_Documentation & archiving Management
  - B_Library management
  - B_archives management
### Alignment study

At this step we will make the correspondence between the indicators of strategic level with the blocks of information system. Some failures of alignment will be detected. We might find that to be such an indicator is covered by several different blocks or a strategic level indicator is not supported by any block of information system.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Target</th>
<th>Area</th>
<th>Bloc</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase the number of students at the University</td>
<td>Creation of nearly 124000 seats in the university</td>
<td>Unsupported</td>
<td>Unsupported</td>
</tr>
<tr>
<td>% enrollment in technical and professional option.</td>
<td>Registration for 2/3 of the students in technical and professional options</td>
<td>A_ Student Affairs</td>
<td>B_new students</td>
</tr>
<tr>
<td>Capacity in technical options.</td>
<td>Multiplication by 2 of the capacity of the technical option</td>
<td>A_ Student Affairs</td>
<td>B_new students</td>
</tr>
<tr>
<td>Number of student in technical options.</td>
<td>10 000 Engineers and 3 300 Doctors per year.</td>
<td>A_ Student Affairs</td>
<td>B_new students</td>
</tr>
<tr>
<td>Number of places in university cities</td>
<td>Creation of nearly 10000 places in 10 Cities hosting university</td>
<td>unsupported</td>
<td>unsupported</td>
</tr>
<tr>
<td>Number of training days for university staff.</td>
<td>Approximate 1.5 million days of training per year for staff of the Education</td>
<td>A_Human Resources</td>
<td>B_human resource management</td>
</tr>
</tbody>
</table>
Conclusion

In this paper, we have presented an approach:

1. Provide a guide for the user at each level of abstraction (strategic and functional).
2. Assess the alignment through the correspondence between the indicators of strategic level and blocks of operational level.
Conclusion

Prospects:
- Assessing the degree of alignment.
- Actions to implement to correct the alignment.
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Thanks for your attention!
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