Integrated quality management systems
from institutional assessment to quality enhancement

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1. INTRODUCTION

2. SIQuIST (Integrated Quality Management System)

3. META EVALUATION

4. CONCLUSIONS
1. INTRODUCTION

Facts and figures

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1911</td>
<td>42%</td>
<td>Of students get a job before graduation.</td>
</tr>
<tr>
<td></td>
<td>85.7%</td>
<td>Of graduates get a job within six months after graduation.</td>
</tr>
<tr>
<td>11.611</td>
<td>2.174</td>
<td>46 Scientific publications in ISI Web of Science.</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>3 Técnicxo provided accommodation in 3 student residences.</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>24.79% Of international students attend a Doctoral degree.</td>
</tr>
</tbody>
</table>

Técnicxo was founded on 23rd May 1911 by Alfredo Bensaíde. Técnicxo has approximately 11,589 students enrolled.
1. INTRODUCTION

LEGAL REQUIREMENTS HEIs

- adopt quality assurance policies and procedures
- develop a quality culture
- promote and implement a strategy for continuous enhancement of quality

PRIORITIES FOR QAS

- extend the scope of assessment
- clarify the consequences of assessment
- internationalize the assessment process
- require tangible results
1. INTRODUCTION

2. SIQuIST (Integrated Quality Management System)

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4. CONCLUSIONS
2. SIQuIST: timeline

- **1993**: Assessment and Accreditation Processes
- **2003**: SIQuIST
  - Reflection
  - Consolidated processes
  - Processes in development
  - Processes to be development
- **2012**: A3ES National Accreditation Agency
  - SIQuIST Regulation
  - Approved fev. 2012
  - A3ES accreditation 2013

- **2017**: Continuous improvement
  - Critical and cyclical analysis of SIQuIST

**European Quality Standards**

**Legal Framework**

**A3ES References for the Internal Quality Systems in HEI**

(October 2016 version, adapted to ESG 2015)
### 2. SIQuIST: certification

#### National Agency certification 2013 – 6 years

<table>
<thead>
<tr>
<th>AUDIT AREAS</th>
<th>RESULTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching and Learning</td>
<td>DEVELOPING Substantial Development</td>
</tr>
<tr>
<td>Research and Development</td>
<td>DEVELOPING Substantial Development</td>
</tr>
<tr>
<td>Links to Society</td>
<td>DEVELOPING Substantial Development</td>
</tr>
<tr>
<td>Information System</td>
<td>CONSOLIDATED Very Advanced</td>
</tr>
<tr>
<td>Human Resource Management Policies</td>
<td>DEVELOPING Substantial Development</td>
</tr>
<tr>
<td>Support Services</td>
<td>DEVELOPING Substantial Development</td>
</tr>
<tr>
<td>Publication of relevant information to stakeholders</td>
<td>DEVELOPING Substantial Development</td>
</tr>
<tr>
<td>Internationalisation</td>
<td>DEVELOPING Substantial Development</td>
</tr>
</tbody>
</table>
2. SIQuIST: model

SIQuIST

Continuous improvement of the quality of the school
Evaluation of the degree of accomplishment of Tecnico Lisboa mission
Criteria and indicators of performance

Quality improvement processes

✓ Self evaluation
✓ External evaluation

✓ Cyclical review of institutional results
✓ Overall assessment of Tecnico Lisboa mission and strategic objectives
2. SIQuIST: structure & coordination

Técnico 11 Focus Areas

- Higher Education
- Research, Development and Innovation
- Technology Transfer

CAPE
Strategic Plan Monitoring Committee

CGQ
Quality Management Council

Multipolar Operation
Internationalisation
Communication

Human Resources

Infrastructure
Processes and Quality
Information Technology
Funding
2. SIQUIST: support documents

STRATEGIC PLAN
Vision / Strategy
Last Version: Jan 2015
Review: Every 5 years

QUALITY PLAN
Targets / indicators
Last Version: Apr 2016
Review: Every 5 years

ACTIVITY PLAN
Implementation of strategies / actions
Last Version: PA 2017
Review: Every year

FRAMEWORK OF ASSESSMENT AND ACCOUNTABILITY
Assessment / Accountability
Last version: QUAR 2016
Review: Every year

Structure/strategic areas

Policy / Procedures
Quality
Last version: May 2012
Review where required

SERVICES’ MANUAL PROCEDURES

Results and goals and evolution of Action lines, targets, indicators

Results: actions

Self-Assessment results QUAR

Last Version: RA 2016
Review every year

Results and goals and evolution of Action lines, targets, indicators

Results: actions

Last Version: QUAR 2016
Review: Every year

Operating objectives, goals, indicators

QAQM
Quality Manual

Policy / Procedures
Quality
Last version: May 2012
Review where required

SERVICES’ MANUAL PROCEDURES
## 2. SIQuISt: strategy

### PROCESSES AND QUALITY

**action lines**

- ✔ Identification/consolidation/dissemination of good institutional practices
- ✔ Review/implementation of evaluation processes for Departments, Research Units and Laboratories
- ✔ Consolidation of Education assessment processes
- ✔ Consolidation of staff/faculty internal assessment
- ✔ Redefinition/optimization of administrative processes
- ✔ Alignment and monitoring Técnico Lisboa positioning in international rankings
2. SIQUIST: strategy & quality

Are we doing the **RIGHT THINGS the RIGHT WAY?**

**QUALITY PLAN**

**KPI - Key Performance Indicators**

- **Quality Indicators:**
  - Process indicators measuring expectations, perceptions, satisfaction, improvement, impact

- **Progress Indicators:**
  - Informative indicators measuring results, achievements, outcomes, success
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3. META EVALUATION

1. PLAN
ESTABLISHMENT OF GOALS
(Re)definition of objectives and targets

SIQuIST

coordinated structures and strategic guidance documents
3. META EVALUATION

1. PLAN
   ESTABLISHMENT OF GOALS
   (Re)definition of objectives and targets

2. DO
   SELF-REGULATION
   Control of objectives, processes and outcomes

SIQuIST

coordination structures and strategic guidance documents

manuals, regulations, records (process records, rules and procedures)
3. META EVALUATION

1. PLAN
ESTABLISHMENT OF GOALS
(Re)definition of objectives and targets

coordination structures and strategic guidance documents

2. DO
SELF-REGULATION
Control of objectives, processes and outcomes

3. CHECK
ACCOUNTABILITY
Self assessment External assessment

Evaluation tools, self assessment and external reports

manuals, regulations, records (process records, rules and procedures)

SIQuIST
3. META EVALUATION

**SIQuIST**

1. **PLAN**
   ESTABLISHMENT OF GOALS
   (Re)definition of objectives and targets

2. **DO**
   SELF-REGULATION
   Control of objectives, processes and outcomes

3. **CHECK**
   ACCOUNTABILITY
   Self assessment
   External assessment

4. **ACT**
   PROMOTION OF QUALITY
   Development of corrective measures

- Recommendations and improvement plans, corrective measures
- Evaluation tools, self assessment and external reports
- Coordination structures and strategic guidance documents
- Manuals, regulations, records (process records, rules and procedures)
### 3. META EVALUATION

**Mapping of Quality Mechanisms in Higher Education**

<table>
<thead>
<tr>
<th>Sub-processes</th>
<th>STRATEGIC</th>
<th>OPERATIONAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>What to do?</strong></td>
<td>Plan according to set objectives</td>
<td>Creation, review and closure of study cycles</td>
</tr>
<tr>
<td><strong>How to do?</strong></td>
<td>Carry out as planned, according to set rules and procedures</td>
<td>Preparation of academic activity</td>
</tr>
<tr>
<td><strong>How to assess?</strong></td>
<td>Monitor and assess results</td>
<td>Selection, admission and registration of students</td>
</tr>
<tr>
<td><strong>How to improve?</strong></td>
<td>Promote continuous improvement</td>
<td>Performance of academic activity and award of academic degree</td>
</tr>
</tbody>
</table>

#### Strategic coordination and guidance (identify coordination structures and strategic guidance documents)

- **Structures**
  - Vice-President for Academic Affairs of the Governing Board
  - Scientific Board
  - Pedagogical Council
  - SC Coordinators
  - Mobility coordinators
  - Academic Office

- **Legislation**
  - Framework Law of Educational System
  - Legal Regime of Higher Education Assessment
  - Award of degrees and diplomas
  - Regulations for Registration
  - Foreign Diplomas

- **IST Documents**
  - Study plans (OI)
  - Academic Guide 1st, 2nd and 3rd cycles
  - Service procedure manual
  - Tutor Manual

#### Performance rules and procedures (identify documents - manuals, regulations, ... - which set performance rules and procedures)

- **Internal**
  - Faculty performance assessment surveys
  - Course Unit and faculty audits
  - Annual Self-assessment reports of Study Programmes
  - Admission characterisation studies of new students
  - Final-year student surveys regarding their academic path
  - Technical and administrative service assessment surveys
  - Activity Report

- **External**
  - Assessments of the Portuguese Accreditation Higher Education Agency (ACES)
  - Assessment of the Order of Engineers under the award of the EUR-ACE seal of quality

#### Assessment and control instruments (identify result monitoring and assessment mechanisms)

- Recommendations and Reports of the Study Programmes
- Audit Improvement Plans
- Recommendations of the External Assessment Committees
- Activity Plan

#### Improvement plans (identify improvement plans, with any preventive and/or corrective measures)

- Recommendations and Reports of the Study Programmes
- Audit Improvement Plans
- Recommendations of the External Assessment Committees
- Activity Plan

<table>
<thead>
<tr>
<th>INDICATORS</th>
<th>Characterisation (AR)</th>
<th>Quality (impact/recognition)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. No. of programmes</td>
<td>8. Vacancy staffing rate</td>
<td></td>
</tr>
<tr>
<td>2. No. of students enrolled</td>
<td>9. Student admission average</td>
<td></td>
</tr>
<tr>
<td>3. No. of course units</td>
<td>10. Dropout rate</td>
<td></td>
</tr>
<tr>
<td>4. No. of Graduates</td>
<td>11. Survival rate</td>
<td></td>
</tr>
<tr>
<td>5. % of women</td>
<td>12. Average completion time of the Study Programme</td>
<td></td>
</tr>
<tr>
<td>6. No. of study programmes with RD&amp;D</td>
<td>13. Average pass rate in Course Units</td>
<td></td>
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<tr>
<td>7. No. of MOOC</td>
<td></td>
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3. CONCLUSIONS

Critical and cyclical analysis of SIQuIST

- Review of current evaluation mechanisms to 3rd cycle programs
- Development information system to register scientific publications
- Disclosure of coordination structures and strategic planning documents
- Improvement of internal communication (Departments and RD&I Units)
- Improvement of working conditions/communication/motivation of staff
- Implementation of improvement plans for better infrastructures
- More and better evaluation of IT services results
- Update IST Quality Manual and Quality and Services Procedures Manuals
### BENEFITS OF SIQUIST CERTIFICATION

**CREDIBILITY**  
+ visibility of SIQuIST, inside and outside the institution

**CONSOLIDATION**  
+ development of SIQuIST, new documents and supporting tools

**COMMITMENT**  
+ awareness and engagement of governing bodies concerning quality issues in quality assurance

**RESPONSIBILITY AND SHARING**  
+ involvement/shared responsibilities between support services and management structures in a joint reflection

**COMMUNICATION AND TRANSPARENCY**  
+ transparency of processes and valuable information for strategic decision making
SIQuIST

✓ **SIQuIST provides** an evaluation of all IST strategic areas, involving different stakeholders in a clear and responsible manner

✓ **SIQuIST is essential** for the institution’s management, transparency, and external accreditation processes

✓ **Challenges of SIQuIST** include guaranteeing updated information and ensuring its outcomes have visible effects in the quality enhancement of the institution’s processes over time
THANK YOU!

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