# UNIVERSITY SERVICES QUALITY EVALUATION
# IN ACCORDANCE WITH THE EFQM MODEL
# AT THE UNIVERSITY OF OVIEDO

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**ABSTRACT**

Within the framework of the collaboration agreement between the National Quality Assessment and Accreditation Agency (ANECA) and the Club for Excellence in Management (CEG), which promotes a model for the evaluation of university management services based on the European recognition pattern of the EFQM, the University of Oviedo has evaluated four of its services: the Publications Service, the Sports Service, the University Library and the Quality Technical Unit.

The objective was the diagnosis of each service's quality management level by means of a self-assessment process, whose result has led to the proposal and implementation of three improvement actions.

The self-diagnosis consists in the completion of a questionnaire that considers all the EFQM model criteria, the analysis of collected information, rendering numerical scores, and the elaboration of a self-assessment report, using the web tool PERFIL V5.0, provided by the CEG.

This paper shows the aims and the methodology of the self-assessment process of four services of the University of Oviedo. It also includes the proposal of a common improvement measure, promoted by the Technical Unit for Quality, regarding the implantation of a Quality Management System using a process approach, in order to obtain a direct positive impact on the EFQM criterion *Processes*, as well as a positive and indirect impact on all the criteria related to *Results*.
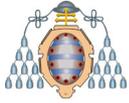
## 1. University Services Quality Evaluation

In the last decade, throughout Europe, University Institutional Evaluation has become the core structure in fostering the improvement of management processes at all levels (lecturing, research and services) with a common aim: assuring the "effectiveness and efficiency of university institutions" (Mora, 1998).

The assessment of university services can be considered "an element in support of quality assurance" (Blaya, 2008) of university education, aiming at the on-going improvement and overall satisfaction of all the parties: lecturing and research staff, administrative and service staff, students, graduates, employers, professional associations, other universities and other lecturing and/or research centres and society as a whole.

"Service quality" has been in the agenda since the 1980's, as a wide-reaching concept initially characterised by a clear orientation towards user satisfaction, involving the implementation of activities which allow an insight and a response to the needs and expectations (demands) of the university community and of society as a whole. This model follows William E. Deming's on-going strategic improvement cycle: Plan (P), Do (D), Check (C) and Act (A).
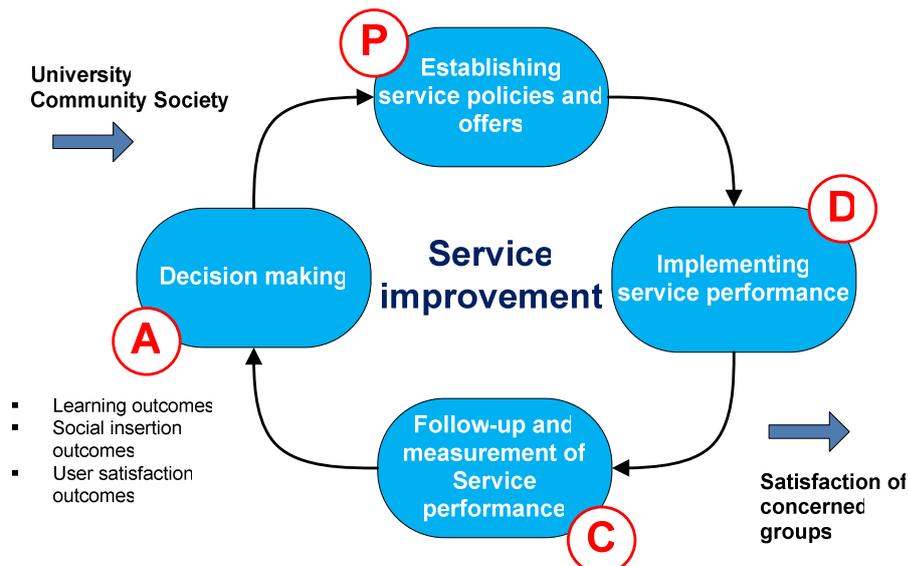


*Figure 1. Deming's improvement cycle.*

The first step in facing a change of pattern in the management of university services is to analyse the current state of the service by means of a self-assessment process which can help to identify its strengths and improvement opportunities. This assessment process, carried out internally, facilitates the external analysis in a subsequent stage, contributing to support its objectivity, transparency and comparability with other similar services thus entering a dynamics focused on the improvement of its performance in the widest sense.
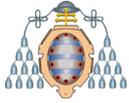
## 2. Evaluation Model

The University of Oviedo evaluates four of its services (Publications, Sports, the University Library and the Quality Technical Unit) in the framework of a model for the assessment of Administration Units and University Services promoted by agreement with the National Agency for Quality Assessment and Accreditation (ANECA) and the *Club de Excelencia en Gestión* (CEG - Management Excellence Club).

This model offers a scheme for recognition/accreditation of excellence which is compatible and in line with the current one at European level, the EFQM Excellence Model, created by the European Foundation for Quality Management, which will allow Spanish universities to position themselves at the same level as the most prestigious European organization.

### 2.1. The EFQM Model

As a non-prescriptive working tool, the EFQM model allows the analysis and evaluation of the progress of an organization while simultaneously fostering a sustained impulse towards excellence.

This model offers a response to questions such as: what is the organization doing?, and which outcomes are being obtained?; in order to achieve this, it is based on nine criteria, with the premise that "*all the results are achieved by means of leadership in fostering planning and deploying management by processes, and that they will become a reality with the involvement of all the concerned groups*".



*Figure 2. EFQM Excellence model*

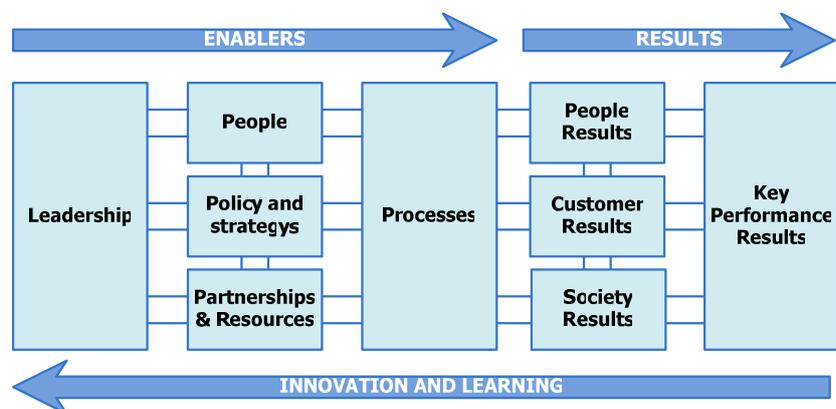### 2.2. Diagnosis

The EFQM model's self-assessment methodology enables a diagnosis of the service so as to get an insight into its current situation, thus obtaining a list of strengths and improvement areas, and, consequently, a proposal of improvement measures.

This stage of diagnostic self-evaluation is supported by a software tool supplied by CEG, named PERFIL V5.0, which facilitates the process.
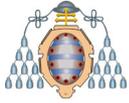
The following actions have been carried out:
a. Formal constitution of the self-assessment committee; i.e. appointment of the coordinator and members of the evaluation team, which will participate in the process.
b. Filling in an electronic questionnaire about the service, which must be done individually with the purpose of gathering all the different points of view about the service, and providing evidence.
c. Analysis of the information gathered in the previous stage, which generates numeric values reflecting the excellence level of the service as detected by each working team.
d. A meeting was held to reach an agreement between the two evaluation teams when the deviation in the numeric value was above 25%, with the purpose of adjusting values by consensus, thus reducing the degree of subjectivity.
e. Writing a final report in which all the elements of the evaluation process are detailed, with emphasis on the service strengths and the improvement areas detected.

## 2.3. Improvement measures

The last stage is the definition, prioritization and implementation of suitable improvement measures. The following actions have been carried out:
a. Identifying the improvement areas out of the detected weaknesses, so as to overcome them.
b. Identifying the causes of each weakness/improvement area listed. In order to do so, the self-assessment committee uses the quality resource tool of brainstorming with the participation of all its members. In order to assure the successful application of this technique and, in general, so as to guarantee the operational adequacy of self-evaluation committees, it has been established that they must be integrated by 8 members at the most.
c. Setting the aims and deadlines of improvement measures, after the causes of each weakness have been identified.
d. Identifying the actions and interventions necessary for aim fulfilment.
e. Prioritizing improvement measures. In order to do this, another quality management tool was used, the "pondered selection", which provides a prioritized list of improvement measures.
f. Establishing the execution and follow-up plan for the selected improvement measures, contemplating their timing, the persons in charge of reinforcing them, the human and economic resources required, and the control and monitoring indicators of aim fulfilment.

As a result of the self-evaluation process, the decision was taken to implement three priority improvement measures for each service. In three of the four services, a horizontal improvement measure was considered a priority, namely, the implantation of a Quality Management System based on a robust approach by processes, with the purpose of achieving a direct and indirect positive impact on the criterion "Processes" of the EFQM model (14%), so that the changes in the management model lead to an increase in the efficiency and the perception of the service by the concerned groups.

The Quality Technical Unit, certified by the norm ISO 9001, and with proven experience in management by processes, co-operates with the rest of the services in the design and implementation of their Quality Assurance Systems.
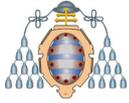
## 3. Implementation of a Management System by Process

This determines a change of philosophy in the organization of the Service "understanding the difference between the 'document what you do' approach and the 'process' approach to system development" (Hoyle, 2000). This involves a deep conceptual change, and hence, it is advisable to raise awareness and provide information to all the members of the service's staff facing such a change. In the University of Oviedo, the Quality Technical Unit offered a training session to all the members of the self-evaluation committees of the services, so as to convey to them the new concepts, methodology, tools and stages for the design and implementation of the Management System (SGC), encouraging active participation, so as to reproduce the working methodology which must then be carried out in each of the services.

The following section details the case study of the process developed in the University of Oviedo Sports Service:

### 3.1. Identification of Critical Success Factors (CSF).

The first improvement measure was to identify the factors facilitating the success and achievement of the Sports Service. With this purpose, in the first meeting, a brainstorming session was held with the persons in charge of the service which rendered an agreed list of 35 factors. In a subsequent meeting, the importance of each of the factors was assessed by means of a Likert-type 5-point scale, so as to allow a 80/20 analysis, according to Pareto's principle, with the purpose of identifying the main CSF of the service. The following factors were identified and agreed upon:

A. Service Range. Range and variety of the services offered: promotion and recreation (fitness, sports training and physical expression), internal leagues, Spanish National University Championships, Sports Federations's competitions and high performance sport.
B. Service Prices.
C. Training: of administrative staff, physical trainers, coaches, instructors, life-guards, etc.
D. Human Resources: motivation and staff involvement.
E. Funding.
F. Facilities: sports facilities and management offices.
G. Communication: internal (horizontal and vertical) and external, with all the interest groups.
H. Academic Acknowledgement of the Sports activity as ECTS credits.
I. Research + Development +Innovation in sports activity management.

### 3.2. Process Map and identification of key processes.

The second improvement measure was undertaken in two phases: the first stage involved the elaboration of a process map of the main activities of the Service. In the second stage, the key processes of the service were identified.

The identification of the main activities of the services was done within a group dynamics scheme, with personnel from each of the units in the service, with the purpose of establishing a range of main activities.
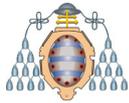
Four main steps were taken:
1. Identifying the main or broad activities, by function, service, post,...
2. Selecting the activities which are necessary for the service.
3. Grouping activities in Processes
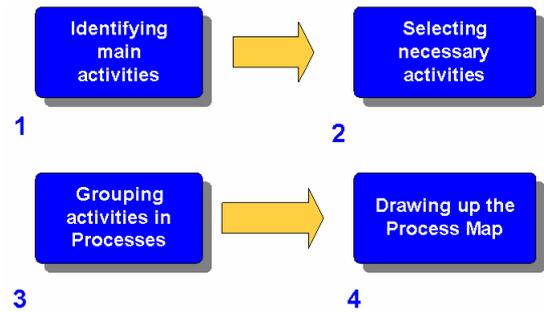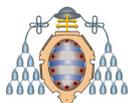4. Drawing up the Process Map



*Figure 3. Elaboration of the process map*

1. While identifying the activities, a list of the service's main activities was put together.

2. In the selection of main activities, the issues taken into account were:
   a. Whether they allow the accomplishment of the service's main mission as well as of its strategic achievements.
   b. Whether they involve a high percentage of the service's resources, so that their optimization and efficiency would have a relevant weight in achieving aims.

   23 activities were identified:
   1) Organizing Sports courses and activities for all
   2) Communication management
   3) Organizing university internal championships
   4) Organizing Spanish National University Championships
   5) Organizing Sports Federations's competitions
   6) Establishing an Aid Programme for university high-performance sportspersons
   7) Maintenance of sports facilities
   8) Management of sports facilities and equipment
   9) Use of sports facilities
   10) Training of Sports Service staff
   11) Defining Human Resources policies
   12) Promoting labour safety, environmental awareness and social responsibility
   13) Evaluating the dedication and motivation of Sports Service personnel.
   14) Process evaluation, monitoring and improvement
   15) Identifying and evaluating the satisfaction of the groups concerned.
   16) Promotion of lecturing, research, quality and innovation activities.
   17) Improvement of on-campus sports management
   18) Establishing alliances and agreements
   19) Managing expenses
   20) Managing income
   21) Managing course enrolment on behalf of the Sports Service
   22) Organising administrative support duties
   23) Managing the Service's annual budget

3. During the next working session, an affinity programme was applied so as to achieve the grouping of activities and the identification of the main processes. 15 processes were highlighted:

| 1. SPORTS COURSES AND ACTIVITIES FOR ALL | 2. UNIVERSITY INTERNAL CHAMPIONSHIPS | 3. SPANISH NATIONAL UNIVERSITY CHAMPIONSHIPS |
|---|---|---|
| - Organizing sports courses and activities for all | - Organizing university internal championships | - Organizing Spanish National University Championships |
| 4. SPORTS FEDERATIONS' COMPETITIONS | 5. USE OF SPORTS FACILITIES | 6. LECTURING, RESEARCH, QUALITY AND INNOVATION ACTIVITIES |
| - Organizing sports federations' competitions | - Use of Sports facilities | - Promotion of lecturing, research, quality and innovation activities. |
| 7. HHRR | 8. MANAGEMENT | 9. AIDS FOR SPORTSPERSONS |
| - Defining Human Resources policies<br>- Training Sports Service staff<br>- Evaluating the dedication and motivation of Sports Service staff. | - Managing expenses<br>- Income management<br>- Managing course enrolment on behalf of the Sports Service<br>- Organising management support<br>- Managing the Service's annual budget | - Establishing an Aid Programme for university high-performance sportspersons |
| 10. CONCERNED GROUPS | 11. MANAGING FACILITIES AND EQUIPMENT | 12. ALLIANCES AND AGREEMENTS |
| - Identifying and evaluating the satisfaction of the concerned groups.<br>- Managing communication. | - Sports facility maintenance<br>- Management of sports facilities and equipment | - Establishing alliances and agreements |
| 13. ON-CAMPUS SPORTS MANAGEMENT | 14. MEASURING, ANALYSIS AND IMPROVEMENT | 15. SAFETY, HYGIENE AND CIVIL LIABILITY |
| - Improvement of on-campus sports management | - Process evaluation, monitoring and improvement | - Promoting labour safety, environmental awareness and social responsibility. |

*Table I. Affinity Diagram*

In a later meeting, this first proposal was analysed, and section 10, on concerned groups, was removed. The rest of the sections integrate the first version of the Service's Process Map, represented in the graph below.

**PROCESS MAP**
**SPORTS SERVICE**



**STRATEGIC PLANNING**

Concerned Groups

SPORTS COURSES AND ACTIVITIES FOR ALL

INTERNAL UNIVERSITY CHAMPIONSHIPS

USE OF SPORTS FACILITIES

SPANISH UNIVERSITY CHAMPIONSHIPS

LECTURING AND RESEARCH ACTIVITIES, QUALITY AND INNOVATION

SPORTS FEDERATION'S COMPETITIONS

Concerned Groups

AIDS FOR SPORTPERSONS | HHRR | TRAINING | ALLIANCES AND AGREEMENTS | MANAGEMENT OF FACILITIES AND EQUIPMENT | ON-CAMPUS SPORTS | MANAGEMENT | SAFETY HYGIENE AND SOCIAL RESPONSIBILITY
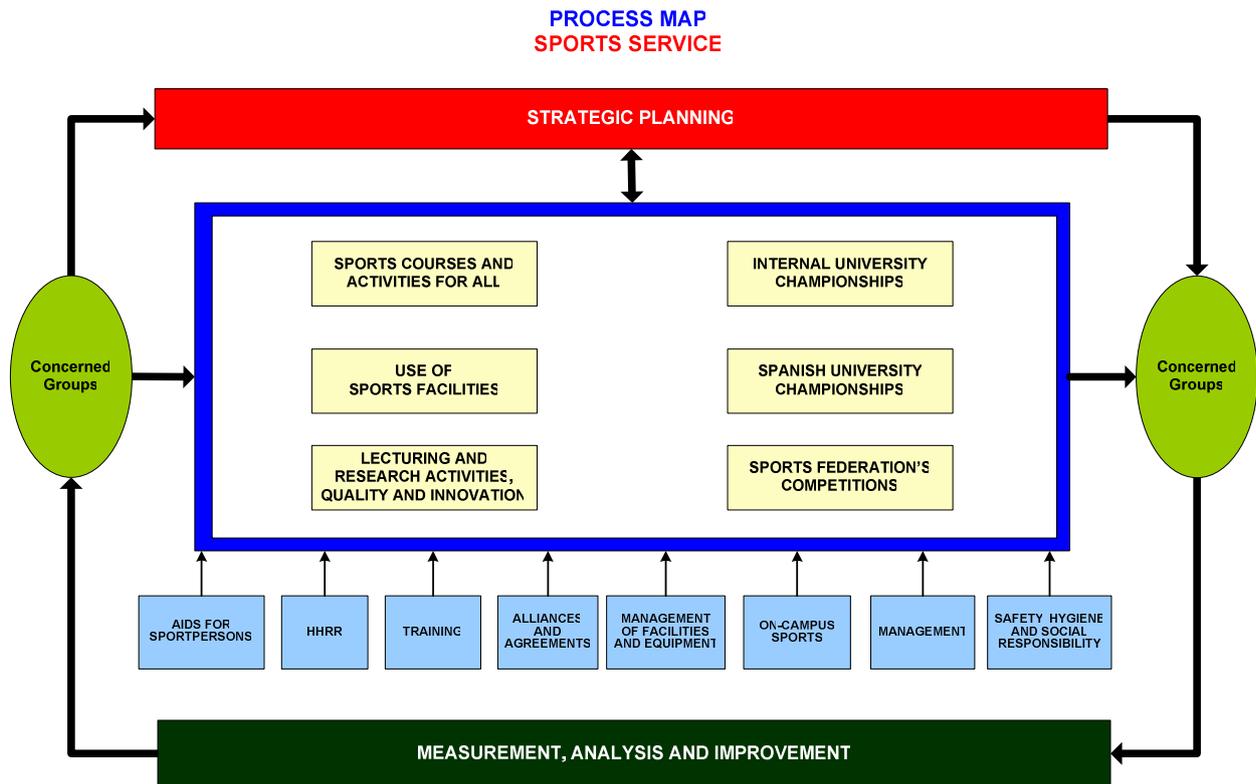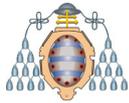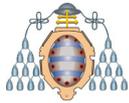
**MEASUREMENT, ANALYSIS AND IMPROVEMENT**

*Figure 4. Sports Service Process Map*

During the second phase, by proposal of the working team, the CSFs were related with the processes identified by means of a double entry matrix, thus obtaining their relation levels. The table below contains the results.

| CRITICAL SUCCESS FACTORS | | | | | | | | |
|:---:|:---:|:---:|:---:|:---:|:---:|:---:|:---:|:---:|
| Service range | Prices | Training | Human Resources | Funding | Facilities | Communication | Academic acknowledgment | R & D + I |
| • | • | • | • | • | • | • | o | ⊗ |
| • | ⊗ | ⊗ | • | • | • | • | • | ⊗ |
| • | ⊗ | ⊗ | • | • | • | • | • | ⊗ |
| • | ⊗ | ⊗ | • | • | • | • | • | ⊗ |
| • | • | • | • | • | • | • | o | ⊗ |
| ⊗ | o | ⊗ | ⊗ | • | o | • | • | • |
| ⊗ | ⊗ | • | • | • | ⊗ | • | ⊗ | ⊗ |
| ⊗ | • | ⊗ | • | ⊗ | o | • | o | ⊗ |
| o | ⊗ | o | ⊗ | • | o | • | • | ⊗ |
| • | • | ⊗ | ⊗ | ⊗ | ⊗ | • | ⊗ | ⊗ |
| • | ⊗ | • | • | • | • | • | o | ⊗ |
| • | • | o | ⊗ | • | ⊗ | • | o | ⊗ |
| • | o | ⊗ | • | ⊗ | • | • | o | ⊗ |
| • | ⊗ | ⊗ | • | ⊗ | • | • | ⊗ | • |
| ⊗ | ⊗ | ⊗ | • | ⊗ | • | ⊗ | o | ⊗ |

(Rows labelled 1–15, row group heading: PROCESSES)

• Strong relationship    ⊗ Mild relationship    o Low relationship

*Table II. Relation Matrix*

The strongest relationship levels have determined the key processes.



SPORTS COURSES AND ACTIVITIES FOR ALL — KEY

INTERNAL UNIVERSITY CHAMPIONSHIPS — KEY

USE OF SPORTS FACILITIES — KEY

SPANISH UNIVERSITY CHAMPIONSHIPS — KEY

LECTURING AND RESEARCH ACTIVITIES, QUALITY AND INNOVATION

SPORTS FEDERATION'S COMPETITIONS — KEY

AIDS FOR SPORTPERSONS | HHRR | TRAINING | ALLIANCES AND AGREEMENTS | MANAGEMENT OF FACILITIES AND EQUIPMENT | ON-CAMPUS SPORTS | MANAGEMENT | SAFETY, HYGIENE AND SOCIAL RESPONSIBILITY
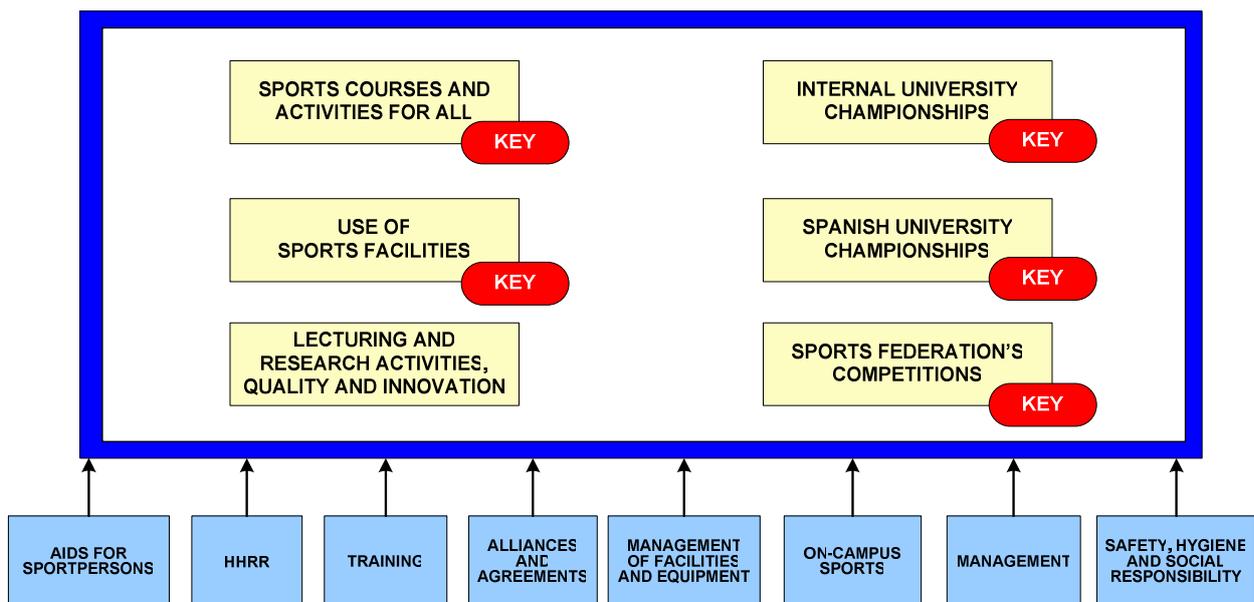
*Figure 5. Key Processes*

## 3.3. Key process development

For the development of each of the key processes, the Technical Quality Unit of the University of Oviedo applied a focus-on-process methodology (Álvarez Suárez, 2008) described below.
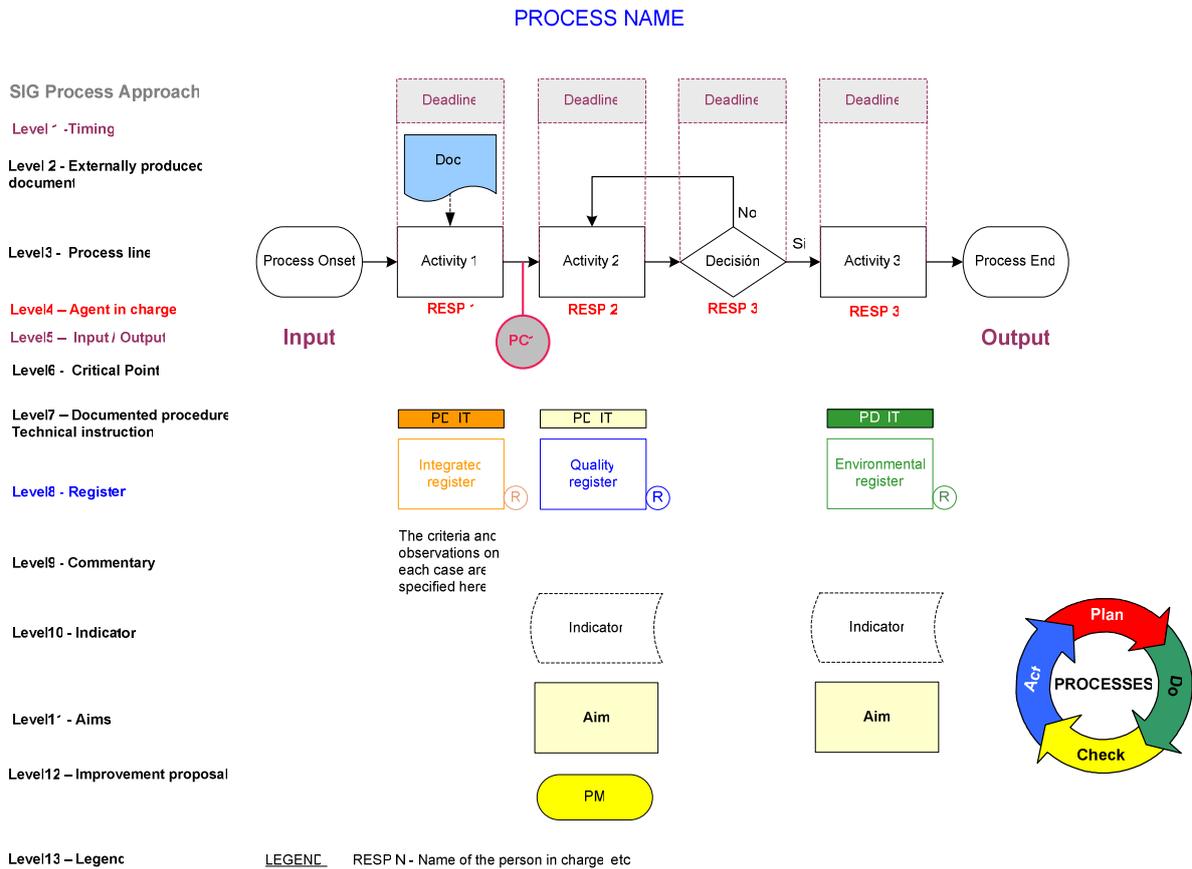


*Figure 6. Technical Quality Unit Focus-On-Process Methodology*

| Level | Name | Description |
|---|---|---|
| *Level 1* | *Timing* | Time slot indicating the duration of each activity in the process. |
| *Level 2* | *Externally produced document* | Documents or registers which did not stem out of the activities of the process, but which provide the service with information about the development of its activities. |
| *Level 3* | *Process line* | Range of consecutive phases of a natural phenomenon or artificial operation Compound of mutually related activities which interact and operate in transforming inputs into outputs. |

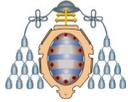| | | |
|---|---|---|
| | | The terminal symbol is a rectangle with rounded edges, used to signal the onset and the end of a process as indicated by the word inside it "Onset" indicates the beginning of the process flow, "End" indicates the end |
| | | The activity symbol is a rectangle, with a brief description inside  Within the flow chart it is used to refer to an activity but it can also indicate a group of activities |
| | | The decision symbol is a rhomboid, which indicates a decision point from which the process diverges into two or more paths  The path to take depends on the answer to the question inside the rhomboid  Each path is indicated according to the answer given |
| | | The flow line indicates the path in the process connecting different elements, for instance, activities, decisions, etc  the arrows signal the direction of the flow |
| | | The connector is a circle used to indicate the next part of the flow chart |
| *Level 4* | *Agent in charge* | The person who is in charge of the process, with specific responsibility for ensuring it renders the expected results (aims). He/she needs to have enough capacity for action and leadership of the process so as to encourage and mobilize the participants. |
| *Level 5* | *Input / Output* | The inputs of the process may have different formats: they may be persons or documents of different kinds, which suffer a change on being acted upon, so that, after undergoing several stages, they provide outcomes.<br><br>The outputs are the final outcomes of the process, the final results of the measures taken. |
| *Level 6* | *Critical Point* | The exact moment when something takes place or must be done.<br><br>It makes reference to parameters on which it is possible to act during the process (that is, which the owner or agents in the process can modify) and which can alter the process's functioning and behaviour, and thus, those of the set of indicators. It can contribute to forecasting the issues in which the process's variability can be adjusted. |
| *Level 7* | *Documented procedure, Technical instruction* | These terms concern execution procedures.<br><br>Documented procedure: a specified way of carrying out an activity or process.<br><br>Technical instruction: Range of precise instructions on how to accomplish a specific action or task. |
| *Level 8* | *Register* | Documents which contribute to proving the conformity of the process with the products and requirements. |
| *Level 9* | *Commentary* | Explanation of a text so as to facilitate its understanding. Commentaries specify criteria, or make observations about each activity, in order to make it easier to understand. |

| Level 10 | Indicators | These allow the measurement and follow-up of the process's orientation towards achieving its goals. These indicators allow us to get to know the evolution and trends within the process, as well as to plan the desirable values. |
|---|---|---|
| Level 11 | Aims | A list of issues, proposals and purposes to be achieved with the aim of improving the institution, the educational offer, the unit or the service undergoing evaluation. |
| Level 12 | Improvement proposal | Measure geared to improving the result of the activities of a process. Improvement measures can concern any of the process levels. |
| Level 13 | Legend | Text introduced on one side of the process to indicate the meaning of acronyms (mainly at the level of responsibilities). |

The follow flowchart shows an example of the approach to a process and the deployment of all the relevant documentation.

# KEY PROCESS OF THE SPORTS SERVICE
# INTERNAL UNIVERSITY CHAMPIONSHIPS



| June | September | October - June | June |
|---|---|---|---|

Planning in previous years

On-campus sports management

Norms

Rules

Internal competition planning

Sports facility reservations

Estimation preparation

Establishing a competition calendar

Dealing with the participant's registers

Championship development

Championship monitoring

Referee wages

Prize-giving ceremony

Evaluation

Presentation of outcomes

**Input**

UD  UCM    P C 1    UDI UCM U    UD    UD    UD    UD  UP    P C 2    CC    UA    UD    P C 3    UCL    **Output** UD

Using referees and collaborators with adequate training

Meeting schedules

Meeting deadlines in payments and prize-giving

PD-DEP-01
Communication to concerned groups

PD-DEP-03
Payment management

PD-DEP-04
Survey

PD-DEP-01
Communication to concerned groups

Calendar R-DEF-13

Individual sportspersons data form R-DEF-14

Team data form R-DEF-15

Team sportspersons data form R-DEF-16

Incident record R-DEF-02

Final report R-DEF-03

Designing a programming of internal competitions adapted to the needs and expectations of the interest groups that pick up the different scopes of activity of sensible way distributed by the different campuses

Anticipating the necessary facilities for its development

Preparing an estimation of the expenses required by internal competitions referees equipment transport etc

Watching sports team and individua competitions

Drawing up data forms for all the participants both teams and individuals

Respect norms and maintaining acceptable behaviour Communicate results to concerned groups and to the press

Dealing with complaints and impeachments

Invoice making Payment follow-up

Communicating concerned groups the scheduled date and time of prize-giving

Evaluating the development of internal competition and passing surveys

- Number of participants teams referees matches internal competition time costs
- Prize-giving ceremony
- Sponsors

% Implanted improvements

% of the budget of the Sports area for internal championships

% Planification fulfilment

% Incident record and solved complaints

% Outcomes obtained

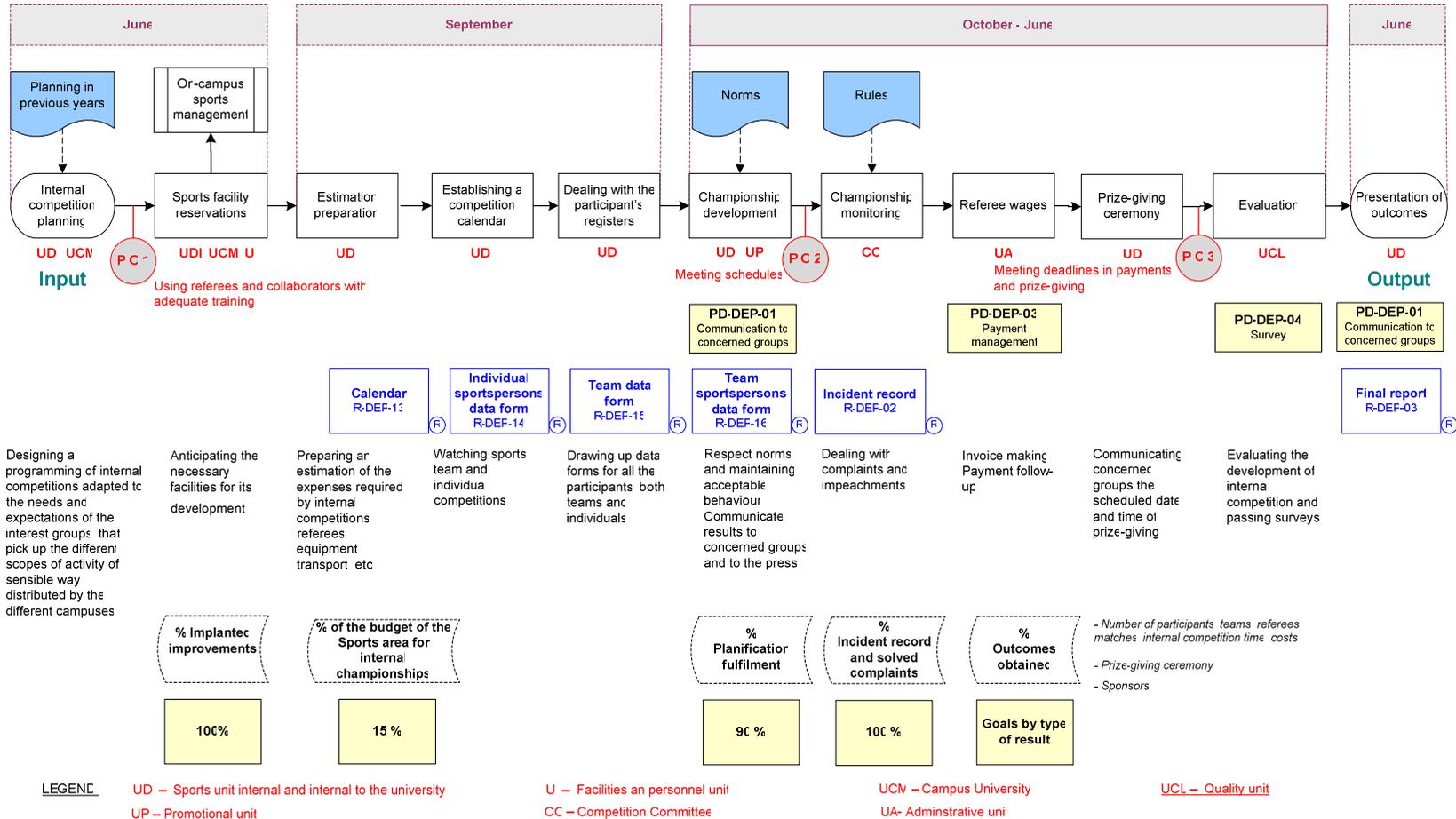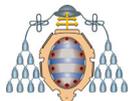100%    15 %    90 %    100 %    Goals by type of result

*Figure 7. Internal University Championships Process*

## 4. Main conclusions

The reform in the University Organic Law (LOU), article 31 on quality assurance, determines the need to establish quality assurance criteria in order to facilitate evaluation, certification and accreditation and considers quality assurance an essential goal of university policies as a whole.

In response to these requirements, the Quality Technical Unit has put into action a methodological model to facilitate the design and implementation of a SGIC, in accordance with the current university laws, as well as with the criteria and guidelines for quality assurance established within the European Space for Higher Education, with the aim of achieving the following objectives:

1. Raise awareness of service quality, by means of a training programme for administrative and service staff.

2. Analyse the current situation within the services, by means of the application of the EFQM Excellence model as a diagnosis tool.

3. Prioritize and develop three web management improvement measures by process, with an innovative approach, tutored by staff from the Quality Technical unity.

4. On-going improvement is the way to Service Quality.

Management by processes is an innovating tool to improve quality. This approach is very robust for being very visual, of easy understanding and based on evidences.

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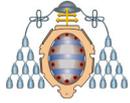
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