



PORTBERTA

Portal de Investigação para a Ciência Aberta

Activity 2 - Technical, diagnostic and prospective studies

E2.2 - Interoperability gap analysis report on the information management systems of UMinho and IPB

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Systematisation of the Characterisation of UMinho and IPB Systems

Detailed Identification of Sources of Information for Entities

Entity – foaf: Person

This Entity of the VIVO model represents individuals from higher education or scientific research institutions.

One of its attributes, "eraCommonsId", represents the "US NIH Electronic Research Administration Commons ID", used as login in the US public administration. Its usefulness, both for IPB and UMinho, is very debatable. Therefore, it was decided that this attribute should be ignored.

The attributes "honorificPrefix" and "honorificSuffix" should also be ignored because they are of little or no use in the names of persons legally accepted in Portugal.

In the IPB, most of the existing information related to this Entity is stored in the Human Resources (HR) SI and LDAP. The existing attributes are: name, e-mail address, title, file with photograph and positions held within IPB.

At UMinho, the existing information related to this Entity is also stored in the SI Human Resources (HR), and the following attributes are available: Scopus ID, Clarivate Researcher ID, biographical summary, name, email address, phone number, file with photograph, ORCID code, positions held within UMinho, and scientific areas and areas of interest.

IPB

ENTITY (attribute group)				
ENTITY / ATTRIBUTES	INTERNAL SOURCES	EXTERNAL SOURCES	GAP	STATUS
Person / label	Generated in VIVO			
Person / scopusid	Non-existent.		It is not currently stored anywhere	
Person / researcherId	Non-existent.		This is the Clarivate ResearcherID. It is not currently stored anywhere.	
Person / eraCommonsId	Non-existent.		It should be ignored.	
Person / overview	Generated in VIVO			
URL / url	Generated in VIVO			
URL / rank	Generated in VIVO			
URL / label	Generated in VIVO			

Name / givenName	Exists in HR System and LDAP.			
Name / familyName	Exists in HR System and LDAP.			
Name / additionalName	Exists in HR System and LDAP.			
Name / honorificPrefix	Non-existent.		It should be ignored.	
Name / honorificSuffix	Non-existent.		It should be ignored.	
Email / email	Exists in HR System and LDAP.			
Geo / geo	Non-existent.		Information not available specifically for teachers and researchers, but geographic information on the institution where they work may be easily obtained.	
Telephone / telephone	Exists in HR System.		The institutional telephone number of the office exists, but it is information with gaps and inaccuracies.	
Title / Title	The HR sytem contains the information on the academic degree and category of each teacher/researcher.			
File / filename	There is a file with the photograph of each teacher / researcher in the HR system.			
owl: Thing (código ORCID)	Partially available in the "Biblioteca Digital do IPB".		There is a repository with some of this information that can be cross-checked with the existing information in the HR system.	
Position / label	Existing in the "Grouper" platform, which keeps historical information about the various			

	positions held by a teacher / researcher in the various organizations within the IPB.			
DateTimeInterval	Existing in the "Grouper" platform, which keeps historical information about the various positions held by a teacher / researcher in the various organizations within the IPB.			
Concept	Non-existent.			

UMINHO

ENTITY (attribute group)				
ENTITY / ATTRIBUTES	INTERNAL SOURCES	EXTERNAL SOURCES	GAP	STATUS
Person / label	Generated in VIVO			
Person / scopusid	Existing in HR.			
Person / researcherId	Existing in HR.			
Person / eraCommonsId	Non-existent.		It should be ignored.	
Person / overview	Existing in HR (but generated by VIVO itself).			
URL / url	Generated in VIVO			
URL / rank	Generated in VIVO			
URL / label	Generated in VIVO			
Name / givenName	Existing in HR.			
Name / familyName	Existing in HR.			
Name / additionalName	Existing in HR.			
Name / honorificPrefix	Non-existent.		It should be ignored.	

Name / honorificSuffix	Non-existent.		It should be ignored.	
Email / email	Existing in HR.			
Geo / geo	Non-existent.		Information not available specifically for teachers and researchers, but geographic information on the institution where they work may be easily obtained.	
Telephone / telephone	Existing in HR.			
Title / Title	Non-existent.			
File / filename	Existing in HR.			
owl: Thing (código ORCID)	Existing in HR.			
Position / label	Existing in HR.			
DateTimeInterval	Existing in HR.			
Concept	Existing in HR.		There are disciplinary areas, but there is the concept of areas of interest in the area of HR contacts.	

Entity – skos: Concept

This Entity is widely used by the VIVO model to represent scientific, thematic, research or interest areas, related to people (teachers and researchers) and other Entities.

In the IPB Information Systems, the information about the scientific areas is available in a database and in the ECTS Guide.

At UMinho, the information about its scientific areas is available in the Academic System, associated with the disciplines that are part of the study plan of the courses taught by the university.

IPB

ENTITY (attribute group)				
ENTITY / ATTRIBUTES	INTERNAL SOURCES	EXTERNAL SOURCES	GAP	STATUS
Concept / label	Available in DB and in the ECTS Guide.			
Concept / prefLabel	Available in DB and in the ECTS Guide.			

UMINHO

ENTITY (attribute group)				
ENTITY / ATTRIBUTES	INTERNAL SOURCES	EXTERNAL SOURCES	GAP	STATUS
Concept / label	Available in the Academic System / Course Catalogue (more specifically, of the subjects that are part of the study plan of a course).			
Concept / prefLabel	Available. no Sistema Académico / Catálogo de Curso (mais especificamente, das disciplinas que fazem parte do plano de estudos de um curso).			

Entity – vivo: Faculty Member

In the VIVO documentation, no information about this Entity has been found. In the data model of Entity "Person" (available [here](#)), this Entity appears related to Entity "Person" through the unidirectional relationship "rdfs: type", which could be interpreted as "a Person is of a Faculty Member type". Thus, one can deduce that this Entity will only be an ontology representing possible types of members of a faculty (or other higher education institution).

In both IPB and UMinho, it was not possible to determine for sure if this attribute is stored by their respective Information System.

IPB

ENTITY (attribute group)				
ENTITY / ATTRIBUTES	INTERNAL SOURCES	EXTERNAL SOURCES	GAP	STATUS
Faculty Member			The VIVO documentation is not explicit about what this Entity represents. Thus, it is not possible to say whether or not this information exists in the IPB Information System.	

UMINHO

ENTITY (attribute group)				
ENTITY / ATTRIBUTES	INTERNAL SOURCES	EXTERNAL SOURCES	GAP	STATUS
Faculty Member			The VIVO documentation is not explicit about what this Entity represents. Thus, it is not possible to say whether or not this information exists in UMinho's information System.	

Entity – foaf: Organization

In the VIVO model, organisations may be related to other organisations: an organisation may be part of another organisation; or it may be an organisation that no longer exists but has been replaced by another organisation; or it may be affiliated or associated with another organisation. In addition, an organisation may be optionally characterised as being of a particular type, which may be a value among the more than 24 ("two dozen") types defined by VIVO.

At IPB, the IS only stores a list with the names and abbreviations of the schools that constitute the polytechnic institute.

At UMinho, there is only information on the various organisations (schools, institutes, departments, research centres, cultural units, service units, etc.) and their hierarchical structure. In addition, several of the attributes of the VIVO model are registered in the IS. However, there is no information about organisations outside UMinho, nor is there historical information about extinct organisations that used to be part of the UMinho structure.

IPB

ENTITY (attribute group)				
ENTITY / ATTRIBUTES	INTERNAL SOURCES	EXTERNAL SOURCES	GAP	STATUS
Organization / label	Existing.		Name of organisation.	
Organization / abbreviation	Existing.			
Organization / overview	Generated in VIVO			
Address / locality	Non-existent.			
Address / postalCode	Non-existent.			

Address / streetAddress	Non-existent.			
Address / region	Non-existent.			
Address / country	Non-existent.			
URL / url	Generated in VIVO			
URL / rank	Generated in VIVO			
URL / label	Generated in VIVO			
Email / email	Non-existent.			
Geo / geo	Non-existent.			
File / filename	Non-existent.			
University / type	Non-existent.			
DateTime Value	Non-existent.			
part of, has part	Non-existent.			
Successor, Predecessor	Non-existent.			
affiliated	Non-existent.			

UMINHO

ENTITY (attribute group)				
ENTITY / ATTRIBUTES	INTERNAL SOURCES	EXTERNAL SOURCES	GAP	STATUS
Organization / label	Existing in HR.		Name of organisation.	
Organization / abbreviation	Existing in HR.			
Organization / overview	Generated in VIVO			
Address / locality	Existing in HR.			
Address / postalCode	Existing in HR.			
Address / streetAddress	Existing in HR.			
Address / region	Non-existent.			
Address / country	Non-existent.			

URL / url	Generated in VIVO			
URL / rank	Generated in VIVO			
URL / label	Generated in VIVO			
Email / email	Existing in HR.			
Geo / geo	Existing in "Infrastructure Management".			
File / filename	Existing in HR.			
University / type			It was not possible to ascertain whether this information is available in the Information System.	
DateTime Value	Non-existent.		It was not possible to work out which date this is, but the possibilities considered (creation date and extinction date) are not available in the Information System.	
part of, has part	Existing in HR.		The information about the hierarchical structure of UMinho can be obtained from the HR database.	
Successor, Predecessor	Non-existent.			
affiliated	Non-existent.			

Entity – vivo: TeacherRole

In the VIVO model, the Entity TeacherRole allows representing the information related to the teaching services performed by teachers and researchers. This Entity relates a person with a course and a time interval, and what the role of that person is in the teaching service carried out.

In both the IPB and UMinho, the information on teaching service is available. However, those responsible for the IS at UMinho were keen to point out that the complete historical information is not stored in the current Information System.

IPB

ENTITY (attribute group)				
ENTITY / ATTRIBUTES	INTERNAL SOURCES	EXTERNAL SOURCES	GAP	STATUS

TeacherRole / label	Available on the "summaries platform" and in an intermediate DB for the construction of timetables.		There is information on who is responsible for each subject, as well as the other teaching staff.	
Course	Available on the summaries platform and in an intermediate DB for the construction of timetables.			
DateTime Interval	Available on the summaries platform and in an intermediate DB for the construction of timetables.			

UMINHO

ENTITY (attribute group)				
ENTITY / ATTRIBUTES	INTERNAL SOURCES	EXTERNAL SOURCES	GAP	STATUS
TeacherRole / label	Partially existing in the "Teaching Service".		It exists, but the full historical information of the MU is not recorded in the system.	
Course	Partially existing in the "Teaching Service".		It exists, but the full historical information of the MU is not recorded in the system.	
DateTime Interval	Partially existing in the "Teaching Service".		It exists, but the full historical information of the MU is not recorded in the system.	

Entity – vivo: Course

This entity of the VIVO model allows courses taught in higher education institutions to be represented. A course may be associated with one or several scientific areas.

In the Information System of IPB, the information about the courses and their scientific areas is available in a database and in the ECTS Guide.

At UMinho, the information about the courses and their scientific areas is available in the Academic System.

IPB

ENTITY (attribute group)

ENTITY / ATTRIBUTES	INTERNAL SOURCES	EXTERNAL SOURCES	GAP	STATUS
Course / label	Available in DB and in the ECTS Guide.			
Concept	Available in DB and in the ECTS Guide.			

UMINHO

ENTITY (attribute group)				
ENTITY / ATTRIBUTES	INTERNAL SOURCES	EXTERNAL SOURCES	GAP	STATUS
Course / label	Available in the Academic System / Course Catalogue.			
Concept	Available in the Academic System / Course Catalogue (more specifically, of the subjects that are part of the study plan of a course).			

Entity – vivo: Grant

According to the VIVO system documentation, a grant (represented by entity grant) is an amount of money provided by a government or other organisation in order to achieve a specific objective. This entity in the VIVO model is generally used to represent research projects that obtain external funding.

In the IPB Information System, information about funding is partially available in the ERP Primavera, but most of it is in the project platform. However, little information is registered.

Up to the time of writing this report, I have not received the information about its availability in the Information System of UMinho.

IPB

ENTITY (attribute group)				
ENTITY / ATTRIBUTES	INTERNAL SOURCES	EXTERNAL SOURCES	GAP	STATUS
Grant / label				
Grant / grantDirectCosts				
Grant / sponsorAwardId				
Grant / localAwardId				
Grant / type				
Grant / abstract				
Grant / totalAwardAmount				
Admin Role (Organization)				
Principal Investigator Role				
DateTime Interval				
Concepts				

Funding Organization				
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UMINHO

ENTITY (attribute group)				
ENTITY / ATTRIBUTES	INTERNAL SOURCES	EXTERNAL SOURCES	GAP	STATUS
Grant / label				
Grant / grantDirectCosts				
Grant / sponsorAwardId				
Grant / localAwardId				
Grant / type				
Grant / abstract				
Grant / totalAwardAmount				
Admin Role (Organization)				
Principal Investigator Role				
DateTime Interval				
Concepts				
Funding Organization				

Entity – vivo: Advising Relationship

This entity of the VIVO model represents the mentoring or tutoring relationship between a supervisor and a student, with a view to obtaining an academic degree, during a given period of time.

In the IPB's Information System, the information about orientations is available in the module of registration of project and dissertation topics.

At UMinho, the information about orientations is available in the Public Examinations system, but it is only available when the request for an examination occurs.

IPB

ENTITY (attribute group)				
ENTITY / ATTRIBUTES	INTERNAL SOURCES	EXTERNAL SOURCES	GAP	STATUS
Advising Relationship / label	Generated in VIVO			
Advising Relationship / type				
Advisor Role (Person)	Available in the registration module of project and dissertation topics.		The only roles played by a supervisor in the guidance process are: supervisor and co-supervisor.	

Advisee Role (Person)			There is only information on who the mentee is, not their role in the guidance process.	
DateTime Interval	Available in the registration module of project and dissertation topics.			
Academic Degree	Available in the registration module of project and dissertation topics.			

UMINHO

ENTITY (attribute group)				
ENTITY / ATTRIBUTES	INTERNAL SOURCES	EXTERNAL SOURCES	GAP	STATUS
Advising Relationship / label	Generated in VIVO			
Advising Relationship / type				
Advisor Role (Person)				
Advisee Role (Person)				
DateTime Interval				
Academic Degree				

Entity – vivo: Academic Degree

This entity in the VIVO model represents the different academic degrees (bachelor degrees, master degrees, doctorates, etc.) awarded by a higher education institution. Neither institution (IPB and UMinho) was explicitly asked if the degrees granted are recorded in any part of their Information System, because the list of possible values that this Entity can take is very short, and because, in case of need, such values could be easily and quickly entered manually.

IPB

ENTITY (attribute group)				
ENTITY / ATTRIBUTES	INTERNAL SOURCES	EXTERNAL SOURCES	GAP	STATUS
Academic Degree	Manual entry.			

UMINHO

ENTITY (attribute group)				
ENTITY / ATTRIBUTES	INTERNAL SOURCES	EXTERNAL SOURCES	GAP	STATUS
Academic Degree	Manual entry.			

Entity – vivo: Educational Process

This entity of the VIVO model represents the relationship between a person who obtains an academic degree taught by an organisation in a given time interval.

In the Information Systems of the IPB, there is information on the degree, institution, classification and year of the training obtained by a lecturer or researcher.

At UMinho, the Human Resources Information System records only the main training (bachelor's degrees, master's degrees and doctorates).

IPB

ENTITY (attribute group)				
ENTITY / ATTRIBUTES	INTERNAL SOURCES	EXTERNAL SOURCES	GAP	STATUS
Educational Process / majorField	Non-existent.		This is a VIVO attribute, the description of which could not be found in the documentation.	
Educational Process / departmentOrSchool	Non-existent.		This is a VIVO attribute, and could not be found a description of it in the documentation. However, it may be considered to refer to the department or school belonging to the institution where the degree was obtained, where the training took place.	
Educational Process / supplemental Information			This is a VIVO attribute, the description of which I could not be found in the documentation. However, it may be considered that the classification obtained may be stored here.	

DateTime Interval	Informação sobre o ano de obtenção do grau.		There is no information on the beginning of the period during which the training was obtained.	
AwardedDegree / Person	Available.			
AwardedDegree / Organization	Available.			
AwardedDegree / Academic Degree	Available.			

UMINHO

ENTITY (attribute group)				
ENTITY / ATTRIBUTES	INTERNAL SOURCES	EXTERNAL SOURCES	GAP	STATUS
Educational Process / majorField	Non-existent.		This is a VIVO attribute, the description of which could not be found in the documentation.	
Educational Process / departmentOrSchool	Existing in HR.		Partially available in the HR.	
Educational Process / supplemental Information			This is a VIVO attribute, the description of which could not be found in the documentation.	
DateTime Interval	Existing in HR.		Partially available in the HR.	
AwardedDegree / Person	Existing in HR.		Partially available in the HR.	
AwardedDegree / Organization	Existing in HR.		Partially available in the HR.	
AwardedDegree / Academic Degree	Existing in HR.		Partially available in the HR.	

Entity – vivo: AwardReceipt

This entity of the VIVO model represents the relationship between a person who receives a prize awarded by an agent on a certain date.

In the Information System of the IPB, the information about the prizes received is registered in the RAD system, but not all the teachers and researchers fill it in, because its completion is optional. However, it is obviously in the interest of the awarded lecturer or researcher to have this information registered in the Information System.

At UMinho, this information is not centrally recorded.

IPB

ENTITY (attribute group)				
ENTITY / ATTRIBUTES	INTERNAL SOURCES	EXTERNAL SOURCES	GAP	STATUS
Person	Partially available in the RAD.			
Award	Partially available in the RAD.			
Agent	Partially available in the RAD.			
DateTime Value	Partially available in the RAD.			

UMINHO

ENTITY (attribute group)				
ENTITY / ATTRIBUTES	INTERNAL SOURCES	EXTERNAL SOURCES	GAP	STATUS
Person	Non-existent.			
Award	Non-existent.			
Agent	Non-existent.			
DateTime Value	Non-existent.			

Entity – vivo: Award

This entity represents the different prizes that are awarded to teachers and researchers of the two institutions. The values for this Entity should be generic; for example, "Nobel Prize in Physics".

In the Information System of IPB, the information about the prizes awarded is registered in the RAD system, but not all the teachers and researchers fill it in, because its completion is optional. However, it is obviously in the interest of the awarded lecturer or researcher to have this information registered in the Information System.

At UMinho, this information is not centrally recorded.

IPB

ENTITY (attribute group)				
ENTITY / ATTRIBUTES	INTERNAL SOURCES	EXTERNAL SOURCES	GAP	STATUS

Award / label	Partially available in the RAD.			
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UMINHO

ENTITY (attribute group)				
ENTITY / ATTRIBUTES	INTERNAL SOURCES	EXTERNAL SOURCES	GAP	STATUS
Award / label	Non-existent.			

Entity – vivo: Agent

This entity represents the different agents that award the prizes to teachers and researchers from the two institutions. The values that this entity can take must identify those agents; for example, "Royal Swedish Academy of Sciences".

In the Information System of IPB, the information about the agents that award prizes is registered in the RAD system, but not all the teachers and researchers fill it in, because its completion is optional. However, it is obviously in the interest of the awarded lecturer or researcher to have this information registered in the Information System.

At UMinho, this information is not centrally recorded.

IPB

ENTITY (attribute group)				
ENTITY / ATTRIBUTES	INTERNAL SOURCES	EXTERNAL SOURCES	GAP	STATUS
Agent / label	Partially available in the RAD.			

UMINHO

ENTITY (attribute group)				
ENTITY / ATTRIBUTES	INTERNAL SOURCES	EXTERNAL SOURCES	GAP	STATUS
Agent / label	Non-existent.			

Entity – vivo: MembershipRole

This entity of the VIVO model represents the relationship between a person and an organisation (a commission, or other type of organisation) in a given time interval.

The IPB does not record this information centrally in its Information System.

UMinho only records institutional positions held at UMinho.

IPB

ENTITY (attribute group)				
ENTITY / ATTRIBUTES	INTERNAL SOURCES	EXTERNAL SOURCES	GAP	STATUS
MembershipRole / label	Non-existent.			
Person	Non-existent.			
Committee	Non-existent.			
DateTime Interval	Non-existent.			

UMINHO

ENTITY (attribute group)				
ENTITY / ATTRIBUTES	INTERNAL SOURCES	EXTERNAL SOURCES	GAP	STATUS
MembershipRole / label	Parcialmente Available.			
Person	Parcialmente Available.			
Committee	Parcialmente Available.			
DateTime Interval	Parcialmente Available.			

Entity – bibo: AcademicArticle

This entity of the VIVO model represents a scientific publication or article written by one or more people, published in a scientific journal or magazine on a given date, and which was supported by certain funding for its preparation and publication.

In the VIVO system documentation that was consulted, the meaning of the "label" attribute does not appear explicitly. However, and by exclusion of parts, it's assumed that it represents the title of a publication or scientific article.

In the IPB, most of the information on academic publications is in the Information System known as the Digital Library. In addition, the Information System known as the Data Repository also contains some of the required information.

At UMinho, most information on academic publications is held in the Academic Publications Information System.

IPB

ENTITY (attribute group)				
ENTITY / ATTRIBUTES	INTERNAL SOURCES	EXTERNAL SOURCES	GAP	STATUS
AcademicArticle / label	Existing in the Digital Library.			

AcademicArticle / abstract	Existing in the Digital Library.			
AcademicArticle / doi	Existing in the Digital Library.			
AcademicArticle / volume	Existing in the Digital Library.			
AcademicArticle / issue	Existing in the Digital Library.			
AcademicArticle / start	Existing in the Digital Library.			
AcademicArticle / end	Existing in the Digital Library.			
Grant	Existing in the Digital Library.			
Concept	Existing in the Digital Library.			
URL / url	Generated in VIVO			
URL / rank	Generated in VIVO			
URL / label	Generated in VIVO			
DateTime Value	Existing in the Digital Library.			
Journal	Existing in the Digital Library.			
Authorship / rank	Existing in the Digital Library.			
Person	Existing in the Digital Library.			
Name / giveName	Existing in the Digital Library.			
Name / middleName	Existing in the Digital Library.			
Name / familyName	Existing in the Digital Library.			

UMINHO

ENTITY (attribute group)				
ENTITY / ATTRIBUTES	INTERNAL SOURCES	EXTERNAL SOURCES	GAP	STATUS
AcademicArticle / label	Existing.			
AcademicArticle / abstract	Existing.			
AcademicArticle / doi	Existing.			
AcademicArticle / volume	Existing.			
AcademicArticle / issue	Existing.			

AcademicArticle / start	Existing, assuming as the initial page on which the article appears in the newspaper or magazine.			
AcademicArticle / end	Existing, assuming as being the final page on which the article appears in the newspaper or magazine.			
Grant	Existing.			
Concept	Existing, possibly in RepositóriUM.			
URL / url	Generated in VIVO			
URL / rank	Generated in VIVO			
URL / label	Generated in VIVO			
DateTime Value	Existing.			
Journal	Existing.			
Authorship / rank	Existing.			
Person	Existing.			
Name / giveName	Existing.			
Name / middleName	Existing.			
Name / familyName	Existing.			

Entity – bibo: Journal

This entity of the VIVO model represents a publication (newspaper, magazine, etc.) that publishes articles or scientific publications.

In the VIVO system documentation consulted, the meaning of the "label" attribute does not appear explicitly. However, and by exclusion of parts, it's assumed that it represents the title of a newspaper or magazine.

In the IPB, most of the information on newspapers and academic journals is in the Information System designated as Digital Library. In addition, the Information System known as the Data Repository also contains some of the required information. However, the abbreviation of a publication is not available, and it does not seem to be relevant.

At UMinho, most information about newspapers and magazines that publish articles or academic publications is in the Academic Publications Information System.

IPB

ENTITY (attribute group)				
ENTITY / ATTRIBUTES	INTERNAL SOURCES	EXTERNAL SOURCES	GAP	STATUS

Journal / label	Existing in the Digital Library.			
Journal / abbreviation	Existing in the Digital Library.			
Journal / issn	Existing in the Digital Library.			
Journal / eissn	Existing in the Digital Library.			

UMINHO

ENTITY (attribute group)				
ENTITY / ATTRIBUTES	INTERNAL SOURCES	EXTERNAL SOURCES	GAP	STATUS
Journal / label	Existing.			
Journal / abbreviation	Existing.			
Journal / issn	Existing.			
Journal / eissn	Existing.			

Entity – extra_vivo: Event

This entity does not belong to the VIVO model. It is intended that this entity represents events that are related to teachers and researchers in each of the higher education institutions referred to in this report.

In the IPB, there is a platform for gathering information about events and activities taking place in the institution. The information is accessible through a database and REST services.

In UMinho, the information about events can be found in the “Event Management System”.

IPB

ENTITY (attribute group)				
ENTITY / ATTRIBUTES	INTERNAL SOURCES	EXTERNAL SOURCES	GAP	STATUS
Start date	Existing.			
End date	Existing.			
Title	Existing.			
Abstract	Existing.			
Text	Existing.			
Photo	Existing.			
Link	Existing (URL to website or official event page).			
Highlight	Existing (indicates whether the event should appear in the highlights area).			

UMINHO

ENTITY (attribute group)				
ENTITY / ATTRIBUTES	INTERNAL SOURCES	EXTERNAL SOURCES	GAP	STATUS
	Available in the "Event Management".			

Entity – extra_vivo: Media

This entity does not belong to the VIVO model. It is intended that this entity represents the news published by the media that refer to a teacher or researcher from each of the higher education institutions referred to in this report.

In the IPB there is a news production team. The information is accessible through a database and REST services.

At UMinho, the news information is in the Clipping Management system - Press clippings about UMinho.

IPB

ENTITY (attribute group)				
ENTITY / ATTRIBUTES	INTERNAL SOURCES	EXTERNAL SOURCES	GAP	STATUS
Date	Existing.			
Title	Existing.			
Abstract	Existing.			
Text	Existing.			
Video link	Existing (optional URL for a video accompanying a news story).			
Photo	Existing.			

UMINHO

ENTITY (attribute group)				
ENTITY / ATTRIBUTES	INTERNAL SOURCES	EXTERNAL SOURCES	GAP	STATUS
	Available at "Clipping Management - Press clippings about" UMinho.			

Entity – extra_vivo: Activity

This entity does not belong to the VIVO model. It is intended that this entity represents the activities carried out by a teacher or researcher from each of the higher education institutions referred to in this report.

In the IPB, there is a platform for gathering information about events and activities taking place in the institution. The information is accessible through a database and REST services.

At UMinho, the information about activities is apparently in the Event Management system. There is only registered information about workshops, seminars, etc., which seem to be a subset of the events categorized as "Conferences and Meetings".

IPB

ENTITY (attribute group)				
ENTITY / ATTRIBUTES	INTERNAL SOURCES	EXTERNAL SOURCES	GAP	STATUS
Start Date	Existing.			
End Date	Existing.			
Place	Existing.			
Hour	Existing.			
Title	Existing.			
Abstract	Existing.			
Text	Existing.			
Link	Existing (URL to the web site or official page of the activity).			

UMINHO

ENTITY (attribute group)				
ENTITY / ATTRIBUTES	INTERNAL SOURCES	EXTERNAL SOURCES	GAP	STATUS
	Apparently available in "Event Management".		It was not possible to confirm whether the information available is really what is intended for this entity.	

Aggregated Gap Analysis

This part of the report presents a table that aggregates information on the gaps identified in the VIVO model entities presented in the previous pages.

For each entity of the VIVO model that has gaps in the current Information System of IPB and UMinho, the following table shows the problematic attributes with the corresponding colour code used in the previous tables, and a short description of the identified gap.

Only the attributes with gaps in at least one of the Information System are presented in the table below.

The table with the aggregated gap analysis does not contain information on the entities for which no information was received on the date on which this report was prepared.

Overview of information GAPS

ENTITY	ATTRIBUTES	IPB	U M	Categorisation of the Gap
Person	Scopus id	Red	Green	These attributes do not exist in the Information System of the IPB.
	Researcher Id	Red	Green	
	Geo / geo	Yellow	Yellow	This information is not available specifically for teachers and researchers, but the geographic information of the institution where they work can be easily obtained.
	Telephone / telephone	Yellow	Green	In the IPB, there is an institutional telephone number for the office, but the information is incomplete and incorrect.
	Title / title	Green	Red	This information does not exist in the Information System of UMinho.
	owl: Thing (código ORCID)	Yellow	Green	In the IPB Information System, there is a repository with some of this information, which may be cross-checked with the existing information in the HR IS.
	Concept	Red	Green	This information does not exist in the Information System of IPB. At UMinho, there are disciplinary areas, but there is also the concept of areas of interest in the area of HR contacts.
Organization	Address / locality	Red	Green	This information does not exist in the IS of the IPB.
	Address / postal Code	Red	Green	
	Address / street Address	Red	Green	
	Address / region	Red	Red	This attribute is not registered in the Information System of IPB and UMinho.
	Address / country	Red	Red	
	Email / email	Red	Green	This information does not exist in the Information System of the IPB.
	Geo / geo	Red	Green	

	File / filename	Red	Green	
	University / type	Red	Yellow	This information does not exist in the Information System of IPB, and it was not possible to understand whether it is available in the Information System of UMinho.
	Date Time Value	Red	Red	This attribute is not registered in the Information System of IPB and UMinho.
	part of, has part	Red	Green	This information does not exist in the Information System of the IPB.
	Successor, Predecessor affiliated	Red	Red	This attribute is not registered in the Information System of IPB and UMinho.
			Red	Red
TeacherRole	label	Green	Yellow	At UMinho, the complete historical information on this attribute is not available in the Information System.
	Course	Green	Yellow	
	Date Time Interval	Green	Yellow	
Grant	label	Yellow	White	In the IPB Information Systems, this information is only partially available.
	Grant Direct Cost	Yellow	White	
	Sponsor Award Id	Yellow	White	
	Local Award Id	Yellow	White	
	type	Yellow	White	
	abstract	Yellow	White	
	Total Award Amount	Yellow	White	
	Admin Role (Organization)	Yellow	White	
	Principal Investigator Role	Yellow	White	
	DateTime Interval	Yellow	White	
	Concepts	Yellow	White	
	Funding Organization	Yellow	White	
Advising Relationship	type	Yellow	Yellow	It was not possible to see whether this attribute actually exists in the Information Systems analysed.
	Advisor Role	Green	Yellow	At UMinho, this information is only available when the "Academic Evaluation" request is made.
	Advisee Role	Yellow	Yellow	At IPB, the student has no special role in the orientation process. At UMinho, this information is only available when the "Academic Evaluation" request is made.
	Date Time Interval	Green	Yellow	At UMinho, this information is only available when the "Academic Evaluation" request is made.
	Academic Degree	Green	Yellow	

Educational Process	Major Field			Attribute VIVO unknown.
	Department or School			This information does not exist in the IS of IPB, and is partially found in the Information System of UMinho.
	Supplemental Information			Attribute VIVO unknown.
	Date Time Interval			Information partially available in the analysed Information Systems.
	Awarded Degree / Person			At UMinho, this information is only partially available.
	Awarded Degree / Organization			
	Awarded Degree / Academic Degree			
Award Receipt	Person			In IPB, this information is only partially available.
	Award			This information does not exist in the Information System of UMinho.
	Agent			
	Date Time Value			
Award	label			In IPB, this information is only partially available. This information does not exist in the Information System of UMinho.
Agent	label			In IPB, this information is only partially available. This information does not exist in the Information System of UMinho.
Membership Role	label			This information does not exist in the Information System of the IPB. At UMinho, this information is only partially available.
	Person			
	Committee			
	Date Time Interval			
Journal	abbreviation			This information does not exist in the Information System of the IPB.
Activity				At UMinho, this information is apparently available in the "Event Management System".