What does Kampal tell me?

A guide on the things that Kampal can teach us about our activity, our environment and about how it can help us make better decisions

Summary

Getting started

We access the page http://research.kampal.com/

On this web page, we see general information. Kampal performs analysis of R & D & i activity of different Institutions. Some of these analyses are public and others private. To be able to visualize an example, we have created a *Demo* project with fictitious people that can be accessed publicly. For the following examples, we refer to this Project.

This should be read while navigating the project. To start, just click on the button *See Demo*, and we can begin to obtain information. Since the data and its organization depend on each Institution, the tabs and options in this example may differ slightly from other real Institutions.

To follow this tutorial, let us suppose that we choose a specific person from the list (it is advisable to choose one of the first ones in the list that appears on the left so that they have more activity). We will refer to this person's name as *Name* or *Full Name*. Depending on the person chosen, the results can be more or less broad: for example, some researchers are active in projects, others are not, etc.

Then, some information or options that we will detail below may be empty or even not active.

Let's suppose that we are *Name*, and that we are interested in knowing all the merits registered in Kampal, what role I play in the global Institution, how my Department is, the quality of my Institute, who the relevant people of my environment are, what problems the collaborative structure of my Faculty have… I even want to know what my strengths and weaknesses are, and how to take advantage of the former or improve the latter, etc. Kampal Research responds to all these concerns, and to obtain the most basic answers we can follow the following guide. Many other functionalities can be seen in the other manuals and guides available on the web.

Question 1: What are my merits?

Publications

I want to know the publications I have and what projects I participate in, as they are the basic data of Kampal.

For this we do
1. *Selection*→Click on "*Search Centre, researcher*" → *Name (Autocomplete)* → *Full Name*. Our name appears.
2. Delete *All*
3. *Add Collaborators* → *None (Important)*
4. *Generate*.

A map appears with only one Ball, ours. The crown indicates that we have some publications.
If we click on it, our affiliations appear in the institution: Department, Centres, etc. For now, we are not looking at anything else in this popup.

We can see the list of our merits: as we are in Default, we are seeing "publications" and therefore all our papers will appear in the List. To see them,

Side Menu → List (Sixth row vertical button).

We see all our registered publications. We can download them to a file that we can then open with Excel, for example.

Projects

Now, we want to see our projects.
First, we change from the current analysis of Publications, to that of Projects

Network → Projects → Generate

We see again a single ball, ours. The crown now indicates that we are PI of at least one project. To see a list of the projects in which we participate, again
Side Menu → List

We see all the registered projects in which we participate as CI or PI. We can download them to a file.

We can see the temporal evolution of our production by years.

Side Menu → Evolution (Third button)

A graph appears with the temporal evolution of our production in Projects. Here, only the projects in which the person analysed is a PI are counted. It is compared with the production of the entire Institution. Of course we come out very low, because it is absolute production. We can click on *Normalize*, or also delete the data of the reference Institution.

Looking at the page, we see many more options, but we will see them later.

What role do I play in the Institution?

I now wonder what my position is in the group of researchers at my Institution. That is, if the number of my publications is high or low, if the funding that I have are many or few, if I am within a strong or weak group, and many other properties that we will see.

Kampal conducts a comparative study of each person in relation to the set of Selected Investigators. Therefore, if I want to know the role within the Institution, I must Select *All* (When I want to know the role I play in my Department, I will select *My Department*). Now, let's go to the role related to the Institution.
First, we select the entire Institution

Selection → All → Generate

First, publications

We will see in Map with some parameters given, which will be the last ones used. They can be seen in the lower left. If we want to start with publications, and that is not set, we can do
Network → Reset → Generate
Now we will be in *publications by JCR Impact*. This means that our papers are weighed by the JCR Impact of the magazine in the year of its publication.

Find us

To find out where we are, we look for ourselves on the Map. In the upper right, we have a search engine,
Search → Name
The map *zooms in* and focuses on us. We can *zoom out* to see our surroundings with the mouse wheel. If there are several matches, we can go from one to another with the arrows below the search engine.

Introduction to the Map

We are represented by a ball of a certain size, of a certain colour and with lines (or Links) that join us with other people (or nodes).
Links: Indicates one or more scientific collaborations between these two people. Link thickness is proportional to JCR Impact of common publications.
Node Colour: We have a certain colour, in general shared with some nodes around us. The system

identifies Communities, as that group of people who collaborate especially with each other, more than with the rest, and once identified, it colours all its members the same. Thus, we see that (in general, it depends on the person chosen for the example) there are several points of the same colour around us. In the example, it is a large community.

Node Size: the area of the node is proportional to the sum of the Impact of our Publications. Therefore, we see our production in relative terms.

Geometry: If we zoom out to see the whole map, we see the set of Links and Nodes, their colours and the general geometry. The nodes that collaborate the most are located close together, configuring communities of the same colour. We see more collaborative areas and others that are more dispersed. Our position in the whole (in the Southeast of the map) is an average position. It is within a large collaborative group, without being in the geometric centre. We see a large central nucleus (**Giant Cluster**) defined as the largest set of connected nodes, and of which we are part; we also see small isolated communities of few people and even isolated people.

Production

We access the production of all the selected people.

Side menu → List (First side button)

Let's look at the Name and the first column. There, the sum of the JCR Impacts of all their publications is reflected for each person. The order is by Internal Production, and reveals the people with the greatest impact of our institution.

I want to know the place I occupy; to do so I write my name

Search → Name

All the matches appear and I see my production. To see myself in the Production list, I delete my name and increase the number of visible people.

Per page → 100

Now I see 100 people per screen, and by going to page 5, I can locate myself.

My Natural Community

We have seen that I have a certain colour, indicating that the system has identified that I am part of a community (all of them of the same colour). To find out exactly what this community is like we are going to

Side Menu → Communities (Second Button)

And we see on the right a list of communities.

We are looking for the leader of your Community, the first in the list.

By clicking, all its members appear on the right, and we can search for ourselves to see our relative position within the community. The most relevant people in this community can be seen in the pie chart.

In excellence

We can carry out a study of high quality activity, considering an analysis where we only take into account the publications of the first Decile (that is, the papers published in a journal located in the TOP10 of the Area). To carry out this analysis we go to the Map of Excellence,

Network → Publications → Excellence → Generate

We now see a much less dense network, since the set of publications is now much smaller. Moreover, geometry, communities, etc. are very different.

We look for us again

Search → Name

We click the arrow until we are located. We see that we are now an isolated node without a crown, indicating that we do not have any items in the top10.

Note: in some Institutions that have a high number of nodes, those that have zero in production are not drawn to avoid noise, so it may not appear on the Map.

Now, in Projects

Now, we want to see what position we occupy in terms of Projects. First, we generate the Project analysis

Network → Projects → Generate

We now see the Map of Projects weighed by Funds. This network is quite different from the previous one. Interestingly, those typical relationships have a certain shape of stars. The first thing to note is that a project with one PI and five CIs, for example, generates a star with the PI in the centre and the CIs around it. When there are many projects and the PIs and CIs change, the structure becomes complicated. However, it does not get too complicated since an underlying star structure remains. This is because PIs tend to always be the same, and to collaborate with CIs: rarely does an PI collaborate as an CI with another PI. In addition, the CIs maintain their fidelity to the PIs. In other words, in Projects, there is a stable hierarchy over time.

Find us

Search→ Name

If I have had projects like PI, I will appear with a crown. The collaborators of my projects as PI, have arrows pointing towards me, and arrows come out of me towards the researchers who are PI of projects in which I participate as CI. That is, the links are now arrows with a point, and they go from the PI to the CI of each project.

Rest

We can now repeat the previous actions to get more information (Look at listings, communities...).

My Department

Much of our activity takes place within a Department. We now ask ourselves what it is like, what role we play on it, and what role the Department plays in the Institution as a whole.

My Department and me:

Department Map

To see our Department, we first select it. I can investigate my Department by looking at the pop up that appears by clicking on the ball that represents me in any graph. Let's suppose my department is

Department_10

Selection → List → Department→ Departament_10→ Generate

Publications by JCR Impact
We initially see this Map: we can verify that it is the map we want, looking at the bottom left in the parameter descriptor.
Several people appear, some of them may even appear isolated by not collaborating with other members of the department, and then several collaborative groups, with their communities identified by colours. (In the descriptor, we must see Automatic Coloring). If we go to *Side Menu → Production* we can see our position in the Department's ranking. We can see whether we are in a giant cluster (central and largest collaborations area), to which community we belong, how big the community is, and who its leader is, etc ...

Projects by Funding
To know its activity in Projects, we first reset: *Modifiers → Reset → Apply* and then *Network → Projects → Generate*. (By default it will use Funding and all types of projects)

We see a Map with a little more relationships than before. We can see in the lists the number of projects such as PI, the funds obtained, etc.

My Position in the Department: Report

To see a global analysis of my position in the Department, we have a complete Report for each person. Report always referring to the Map in question; we emphasize this: if we are looking at a *Department*, the Report will give us relative, statistical and comparative positions within the Department; if the Base Map is *All*, it will be data relative to the Entire Institution.
To see the report, we click on the ball that represents the person we want (in the example we will use Carolina), and on the menu that is displayed we click on Report.

Click on Name → Report

Three tabs appear, the first is **Summary**. It contains a global report on all the activity of the person in question. First, it gives statistical information: We see that it has 4 publications, 0 of excellence; 1 project, etc.
In **Activity** (mean of publications and Projects) it is located at the 85th percentile and in Centrality at the 100th percentile. In *Observations*, the properties in which it is either well below the average (with a red dot) or well above the average are highlighted (with green dot).
In the lower right, we see a **Colour Map**: we consider all the members of the Selection, and we place each one according to their activity in publications (X axis) or in projects (Y axis). Where there are more people, we colour the area in more and more vivid red; where there is no one, we have blue colours. The Upper area is the one with the most activity, etc.
Similar information can be seen in publications and projects.

My Department at the Institution

Now, I want to know the activity and the role my Department plays in the institution as a whole. I go back to the Map of My Department, and

Side Menu → Selection Report.

We see that several tabs are accessible, the first one is *Summary*. Here, a global vision of the activity of the Department analyzed is given.

We see that the number of members and the activity in general has been declining in recent years.

This is verified if we look at publications or projects. For example, in publications, in the paper Evolution graph, the annual production has a clear decreasing trend. In addition, no researcher from the Department is among the Top10 of the institution.

In *Publications and Projects* each of these aspects are detailed; Alerts indicate the activities of the Department that are significantly above or below the Institution's average.

In the index of internal-external activity we see very high numbers: 93% in Publications and 96% in projects, indicating that almost all the activity is carried out within the Department_10, with almost zero collaborations with researchers from other Departments.

These and other significant events are indicated in Alerts.

This was about the Department's own activity; let's now see a **comparison** with the other Departments; for this we go to *Comparison*.

In the graphs, our department appears in red.

Other studies

We can carry out an analysis of the role played by Carolina within other groups

My Collaborators

Selection → Name + Level 1

An analysis is generated with Carolina and all her collaborators, understanding as such those who have signed a publication or a project with Carolina.

My Institute

Let's suppose that Name belongs to the Institute₁. We can analyse the Institute in question
Selection → Institute_1

If we look at *Side Menu → Selection Report → Comparison*, we can see the role that the Institute plays in both publications and projects, in absolute terms and per capita.

Recommendations

From everything seen so far, we could deduce many relevant information about the person analyzed, among others:

- The activity carried out in Publications, in projects and other metrics, both in absolute and relative terms.
- The relative position within the Institution, Department or Institute
- The position of his/her affiliations (Area, Department, Institute, Centre ...) in the whole of the Institution
- The communities she/he collaborates with, both in publications and in projects
- The role she/he play within their communities
- The temporal evolution of her/his activity