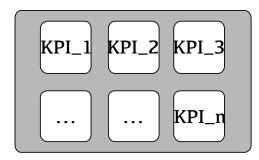




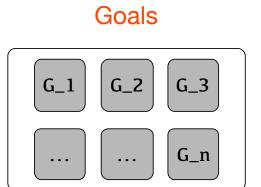
how do you start? (in practice)

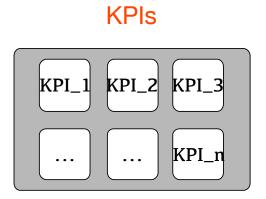
KPIs





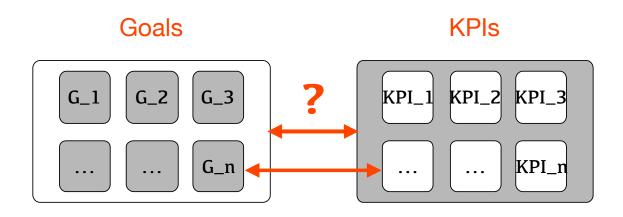








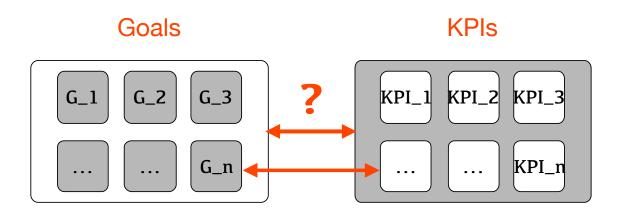








- _____1) How to formulate goals meaningfully?
- 2) On what criteria (KPIs) are the goals preferably measured in order to assess the expected outcome?







methods

Case studies with multi-national organizations and SME on their performance management practice.

Comparative pattern analysis and grounded creation of a general performance management model.

Surveys

Consulting projects





research questions

What is the common practice in performance management?

How goals and KPIs are reflected in these approaches?

What recommendations can be derived to advise the further development of a performance management systems?

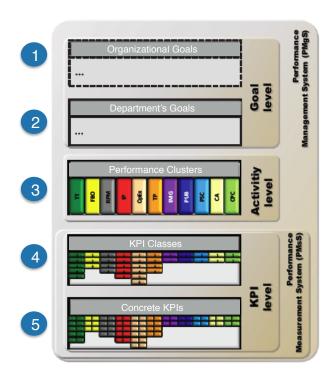




Performance Management & Measurement



5 Levels Performance Management Model



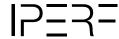
1. Organizational Overall Goals

2. Department Goals: (8 goals)

3. Performance Clusters: (11 clusters)

4. KPI Classes: (37 classes)

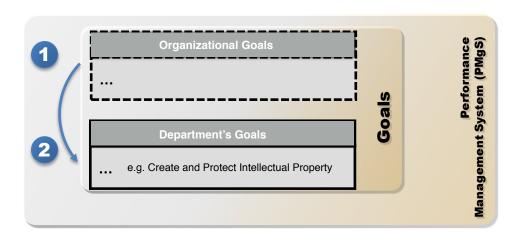
5. Concrete KPIs: (ca. 160 KPIs)





interface 1-2: organizational & department's goals

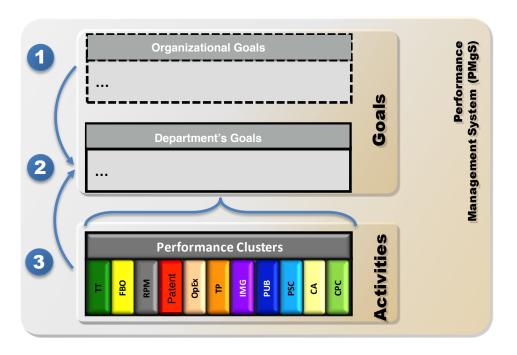
Organizational goals (level 1) need to be broken down into department goals (level 2). Be aware: formation of goals is a rather difficult task! (long projects, uncertainty of the process outcome)





interface 2-3: goals and activity level

The department's goals can only be achieved by pursuing a certain mix of activities, i.e. it is necessary to have the "right" mix of activities in place or to develop the department towards that mix to attain the goals.







level 3: performance clusters

Technology Transfer

New Business Opportunities

Research Portfolio Management

Patent Creation

Operational Excellence

Talent Pool

Image

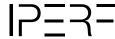
Publications

Presence in sc. Community

Collaboration with Academia

Collaboration with Partners and Customers

Performance clusters are activity-based categories.





level 3: performance clusters

New Business Opportunities

Research Portfolio Management

Patent Creation

Operational Excellence

Talent Pool

Image

Publications

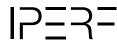
Presence in sc. Community

Collaboration with Academia

Collaboration with Partners and Customers

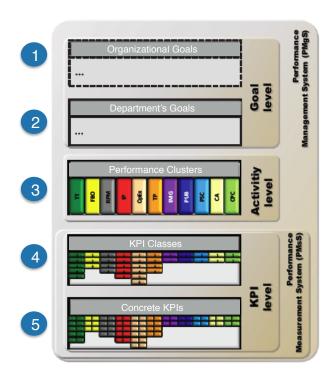
Technology Transfer

Performance clusters are activity-based categories.





5 Levels Performance Management Model



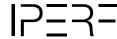
1. Organizational Overall Goals

2. Department Goals: (8 goals)

3. Performance Clusters: (11 clusters)

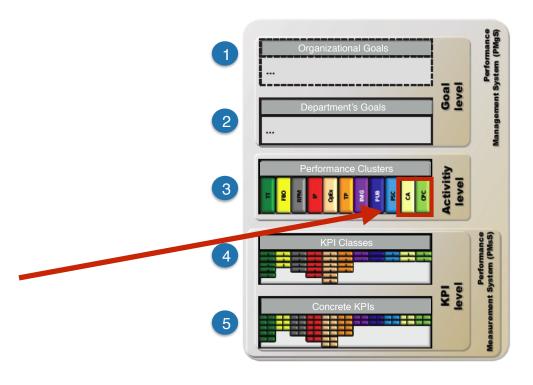
4. KPI Classes: (37 classes)

5. Concrete KPIs: (ca. 160 KPIs)





5 Levels Performance Management Model



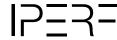
1. Organizational Overall Goals

2. Department Goals: (8 goals)

3. Performance Clusters: (11 clusters)

4. KPI Classes: (37 classes)

5. Concrete KPIs: (ca. 160 KPIs)





Performance Clusters: Collaboration with Academia



definition and KPI examples

Cluster Collaboration with Academia (CA)

evaluates the *intensity* or *volume* as well as the *quality* of input from, and activities related to, collaboration with academic partners.

Input refers to output produced by academia and taken up by the research organization. Activities comprise joint work as well as actions trying to impact the roadmap of academic research.

- Investment at universities in relation to total budget, # of guest researchers from universities (sabbaticals etc.);
- Subjective evaluation of each university project from the supervising professor via a questionnaire.



benefits

The benefits for an industrial research department to collaborate with academia are:

- Brand and recruitment: better visibility (sponsored initiatives, access to real business environment to study, companies presentations, etc);
- Student contacts and development of expertise: cooperation in teaching (learning tasks, entrepreneurial projects, theses, case studies, internships);
- Development of expertise and competitiveness: shared expertise and networking (expert consultation, events, seminars on current research results, supplementary and management training, information services);
- Innovative operational models and new inventions: cooperation in research (restricted and longer term research ventures, support functions for inventions and research activities, promotion of entrepreneurship).



benefits

For students, such collaboration can result in higher qualifications, where eventually the students can take positions of responsibility in academia or industry, or just become a part of the scientific staff team.

For the research department, collaboration can lead to the development and promotion of new methods or access to state of the art information.



drawbacks

The drawbacks of collaborative research should not be underestimated.

In the event of successful invention, it is often difficult to *dismantle the ownership of the intellectual property* rights to the invention.



KPI classes

We distinguish two KPI classes:

- Intensity of collaboration; and
- | Quality of collaboration.

The intensity KPI class assesses *volume of involvement*, e.g. investment at universities in relation to total budget, or number of guest researchers hosted within research coming from universities.

The quality KPI class can, in general, only capture *subjective opinions*. These are the personal opinions of the people involved in the collaborative projects.



Performance Clusters: Collaboration with Partners and Customers



definition and KPI examples

Cluster Collaboration with Partners and Customers (CPC)

addresses joint activities between the research organization and partners and customers, as well as the output resulting from these activities.

The KPIs reflect the proximity to partners and customers (*intensity* of collaboration), as well as the *quality* of the activities. Such proximity reflects how *well-aligned* with partners and *engaged* with customers, the industrial research department is.



what is different?

The motivation for the CA cluster is entirely applicable to this cluster, too.

The clusters are "somewhat" related, nevertheless they address *different linkages* in terms of the manuals (Frascati/Canberra, Innovation Manuals), and therefore justify their separate existence.

The differences lie especially in the *nature of the conducted research*:

- | while the CA cluster focuses on basic research tackling theories or concepts,
- the CPC cluster points at applied research addressing, for example, prototyping in real business contexts.



what is different?

As an analogy to the CPC cluster, this cluster also consists of two KPI classes:

- Intensity of collaboration;
- | Quality of collaboration.

The intensity KPI class assesses the *volume* of involvement with partners. This KPI class is a *quantitative count* of collaborative projects. Example KPIs include the number of projects involving an external stakeholder versus the total number of projects within a department, or the number of joint research results like showcases, prototypes, etc.

Again, analogous to the second KPI class of the CA cluster, the quality KPI class of the CPC cluster captures *subjective assessment* by customers or partners.

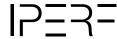




Summary

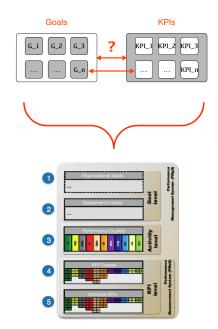


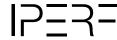




summary

- 1. Practitioners need more than two levels, to assess department's performance
- 2. The relations can be established between goals level and KPIs level via performance clusters that represent typical activity mix
- 3. It is important to focus not only on quantitative KPIs because it is comfortable, quality makes difference!
- 4. Performance Management is a creative, iterative process that needs collaboration





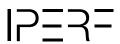


further readings

Samsonowa, T., Buxmann, P., and Gerteis, W. (2009). Defining KPI sets for Industrial Research Organizations - A Performance Measurement Approach, International Journal of Innovation Management, Vol. 13, No. 2.

Samsonowa, T. (2012). Industrial Research Performance Management; Key Performance Indicators in the ICT Industry, Heidelberg: Springer.

Samsonowa, T., Bittner, P., and Lundsager, B. (2013). IP Dashboard: Measuring and Managing IP Performance, Proceedings of the Summer School on the Economics and Management of Intellectual Property, Alma Graduate School, University of Bologna, Bologna, June 10-14.





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Backup



Cluster Comparison

Cluster ranking

