Take responsibility, improve your R&D organization

Seminar

INSTITUTIONAL DEVELOPMENT OF THE R&D SYSTEM AND ECONOMIC PERFORMANCE

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ad Section 3:

„Responsibility in the R&D management“

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Introduction

- **Where do I come from, my background**
- **I have been working all my professional life in R&D (D, R, D, R)**
- **I bring some of my experiences**

Main Contents

- **Responsibility**

  as a Key Managerial Task

- **Improvement**

  of the Organization

  as Managerial Responsibility

Change

- If you want to change something you need to know where you are
- You need to know your status
- In order to get this knowledge best is to do a **SWOT** analysis

Improvement

- So you first do a **SWOT analysis**
- Next set up an **Action Plan**
  work on the issues you found in the SWOT

Improvement Issues

- **Restructure the organization**
- **Create a flat structure**
- Look over the ‚rim of the plate‘
  - **Prepare the future**
- **Act only in areas where you can become successful**
  - because you are already brilliant there

Responsibility

- **Mainly from TOP to BOTTOM**
- So R is regarded as
  highest at the TOP
  lowest at the BOTTOM
- „The Boss is responsible for everything“ (I‘m not)
- This is a dangerous ***error***
  - Not only the TOP carries responsibility
  - Some important issues become visible initially at the BOTTOM
  - Consequence: You need also very responsible people at the BOTTOM: so put responsibility also into the requirements list
- **Full R is everywhere with all consequences**

Responsibility

- Resposibility correlates with money involved
- BOTTOM-R tends to be cheaper
- TOP-R is usually more expensive
- In other words: The expensive mistakes are made at the TOP
- Exceptions confirm the rule
  - Example: Semiconductor Development
    - One un-successful developmental run thru the fab is easily ‚worth a house‘
    - That was the **currency** in our thinking
    - There can be also Million-responsibility at the BOTTOM

SWOT: View your Status

- A SWOT analysis (here especially w.r.t. R&D) starts by listing all below issues carefully and thoroughly

Strength	**Weaknesses**
Opportunities	Threats

Strengths

- An R&D organization lives from its **strengths**
- When there is no strength, there is no **force**
- Strengths - when improved - become a **force**
- Strengths are the ‚**sine qua non**‘ of an organization

Weaknesses

- List anything which is suboptimal
- You need to be honest with yourself
- An Indicator where you have to do something
- You can **find** basic problems here
- You have to **cure** basic problems here

Opportunities

- They are correlated with your possibilities
- Select only a limited few
- The fewer you act on, the more successful you will become
- It is a key issue not to become too greedy
- Apply **Knowledge Management**
  - Collect your organizations knowledge
  - Make it applicable in your organization

Threats

- Traps on your way to success
- What will be in your way
- Where **you and your people** have to be cautious
- Andy Grove (intel) says:
  - **„Only the paranoid survive“**
  - How to Exploit the Crisis Points That Challenge Every Company
  - The Threat and Promise of **Strategic Inflection Points**

What does a SWOT analysis tell you

- It can direct your strategy
  - Where are you **good**
  - Where are you **weak**
  - Where you could **succeed**
  - Where are the **traps to avoid**

Action Plan: The remedy of all found

- (+) View your **Strengths,** e.g.
  - Outstanding research center
  - Well educated and experienced scientific and other personal
  - Long lasting and also recent experience in research projects
  - Strong improving scientific and technical infrastructure
  - Are there any issues to improve

Action Plan

- (-) View your **Weaknesses**, e.g.
  - Weak infrastructure (buildings and facilities)
  - Unclear mission
  - Organizational structure
  - **Too broadly underway**
    - Fear to miss an opportunity

Action Plan

- View your **Opportunities**
  - The European Research Area (ERA)
  - Support by the EC research DG
  - Internationalization
  - Rethink mission
  - Define strategic goals
    - Self evaluation, external body
  - Implementation of a scientific dialogue
  - **Enhance interplay with universities**
  - **Enhance cooperation with industry**

Action Plan

- (!) View your **Threats**
  - Located far away from where the music plays
  - Unstable funding
    - does not ensure long term planning
  - Competing research institutes
  - **Play only those instruments that you master brilliantly**

Resulting Actions

- **Find out weak issues**
- Make a **priority plan per organizational section**
  - Mapping of each section
    - Is the section still vital
    - Is there future vision in it
  - Positioning versus Competitors (local & international)
  - Act on other sections in the same fashion
  - **Select only the most promising** to proceed with

Resulting Actions

- <u>Share your leadership</u>
  - By defining a decision making process
  - The more you share
  - The better your people will cooperate
  - The more successful your organization will become

Change

- **Set up a time table for change**
- **Prepare a Mission**
  - **Mission Statement**
    - With regular review
  - **Scientific direction**
    - **Select only the few most promising**
    - **You can't be excellent at everything**
    - **Avoid too many small activities**

Change

- **Work on weaknesses**
  - Start with infrastructure (buildings and facilities)
    - Especially when you receive **infrastructure funding**
  - More in-depth Quality of Scientific Work
    - List of publications, Citation index
    - **Impact analysis,** Increasing labour and financial success
    - List of patents
  - Use **Knowledge Management** to avoid repetitions
    - Avoid the „We don‘t know, what we know“
  - Proper Recruitment
    - Often a problem due to financing

Change

- **Rearrange the Management Structure**
  - Organigram
    - Your existing one might be far too complicated
  - **Decision Making Process**
  - Look over the ‚rim of the plate‘
    - **Be responsible: <u>Prepare for the future</u>**
    - Who will be leading next
- **Direction towards FP7**
  - Links to Frame Program

Important

- **Share your leadership**
  - With a commonly agreed decision making process
  - If you are the leader: look for your successor
- **People will buy the decisions**
  - When they were part of the process

Important

- **Regard the impact of changing rules**
  - **Any of the outside conditions might change**
- **Find your way through uncharted territories**
- **Target: Continuous Improvement**

Summary

- The message is short
- Do something about your organization
- Re-arrange your organization
  - Into a flat structure
  - Provide a next generation to lead
  - Share your leadership with your brilliant people
- Do fewer activities better
- Look for connections
  - with Universities
  - <u>with Industry</u>

Thank You for Your Attention