

# **Reviewing RALIS**

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## **1 Introduction**

Delegates from several Technology Stations, Tshumisano Trust managers, and RALIS facilitators met at Roodevallei Lodge on 18 and 19 September 2008 to assess experiences with RALIS exercises, share lessons learnt and discuss the way ahead. The purpose of this paper is to summarise the results of those discussions.

## **2 Status of Technology Stations and starting point of RALIS application**

Technology Stations (TS) are at different levels of maturity and performance. Some stations are performing well whilst others are struggling with their mandates, staff, administrations and projects. Some stations assume that their services are valuable whilst there may exist a mismatch between the service offering of the stations and the priority needs of entrepreneurs. Many potential customers are not aware of, or do not clearly understand the offer from the station. Customers may deem the service is not so high on their priority.

The Technology Stations model aims to transfer research from the university to industry, but in many cases the transfer was mainly from tech station to industry. In many instances the relationship between the Technology Stations and the university is poor. There are different reasons from this, which range from competition by the technology station with lecturers, to problems with administration and financial management. In several instances the university did not recognise the potential of the technology station to contribute to the socio-economic objectives of the university.

The current Tshumisano management and reporting systems mainly emphasize small enterprise development and under-emphasize technology transfer or sectoral development. Many of the best results of the technology stations are not even contained in the formal reporting of the station.

These are but some of the issues interrogated by a RALIS exercise, which assists Technology Stations and others stakeholders in the innovation system to re-think critically, what should improve as priority. RALIS allows the station to take a more systemic perspective on its role and influence in the system.

### 3 Outcomes of RALIS exercises

The TS managers that have already witnessed a RALIS, experienced the following outcomes / benefits:

- regarding the internal structure of the TS:
  1. Gaps in Technology Stations business model, strategy and practices identified
  2. Technology Station more open to participatory problem solving (more heads better than one)
  3. Technology Station supply chain strengthened to leverage intellectual capital & capacity to execute
- regarding the relationship between TS and university:
  4. Increased visibility of Technology Stations Value to the university
  5. Clarified expectations between Technology Stations and academia, administration and leadership
  6. Negotiating power of TS strengthened
- regarding the relationship between TS and industry:
  7. High visibility of Technology Stations value to the industry
  8. Strengthened participation & commitment from key stakeholders
  9. TS has better understanding of the structure of the industry it is supposed to serve
  10. University and Technology Station form a better hypothesis of the industry needs
- regarding the innovation system in general:
  11. Technology Stations understanding its role & fits within business support structure
  12. Strengthen & establish networks:
    - New relationships & connections
    - Develop joint programmes with partners to address opportunities or issues
  13. Shape the support from Tshumisano PMU and its partners to the Technology Station

## **4 Explaining the features of RALIS**

### **4.1 Features of RALIS that are highlighted to TS**

In the past, RALIS was presented to TS as a tool to improve its interaction with industry. The main focus was to be at

- improving the understanding of the structure of the sector(s) the TS serves,
- improving the understanding of the technology-related needs of the sector(s) the TS serves,
- identifying options for practical activities that would help the TS to better fulfil its mandate.

Now that RALIS has been applied successfully in several TS, it can be advertised in a different way to other TS who are in principle interested. RALIS is a flexible, versatile tool for engaging and focussing a large number of stakeholder perspectives and abilities, onto a common challenge. This feature can be pointed out to a given TS. This would involve two steps:

1. Tshumisano or RALIS facilitators would amongst themselves share the information they have on a given TS and discuss how a RALIS exercise there should be focused and scoped.
2. Tshumisano staff and / or RALIS facilitators would meet with TS management, present RALIS in a targeted way (based on the discussion mentioned in the previous paragraph), and tailor the structure of the RALIS exercise to the needs of the TS.

### **4.2 Features of RALIS that emerge during the exercise**

In almost all the cases serious management and relationship issues within the station, and between the station and the university, featured strongly. Somebody said “it forces them to get the skeletons out of the cupboard”. The focus of the RALIS exercises shifted from being predominantly outward to being outward and inward, i.e. analyzing and identifying options for improvement regarding

- the internal functioning of the TS,
- the relationship between TS and university,
- the relationship between TS and industry.

The management and staff of a given TS is not necessarily comfortable to have these items explicitly included in the focus and deliverables of a RALIS exercise. They will necessarily come up during the exercise, though. It is advisable to point this out to TS management beforehand in order to manage expectations properly.

Would it make sense to have separate exercises, one looking at internal relationships, another one looking at external relationships? The answer is No, since both processes reinforce each other. In particular, industry representatives appearing on campus creates an incentive for academics from outside the TS to make an appearance.

### **4.3 The difference between RALIS and other approaches**

RALIS is different from other approaches that a TS might choose, such as a market analysis or a study on patterns of technology transfer. The distinctive feature of RALIS is its use of the innovation system concept. It does not focus at “technology transfer” only, and certainly not in a narrow way. The innovation system perspective includes a perspective at the general framework conditions that a given sector or cluster faces. This includes economic issues, for instance the impact that trade policy, industrial policy, or other policies have on the sector. It also includes wider business issues, such as changes in market structures, fierce competition with foreign competitors, or the evolution of domestic or global value chains. This focus of RALIS has two implications:

1. It creates a wide perspective for a RALIS exercise, since it encourages businesses to mention a broad variety of issues that they are facing, rather than encouraging a narrow focus at technology only. It generates information on how important technology issues are compared to other issues. As a consequence, a TS can better understand whether the services it offers address issues that are at the centre of attention of companies, or rather off the radar screen of company management. Accordingly, a TS receives information on how to shape services that address issues that score high among companies’ concerns.
2. It generates not only observations but also proposals regarding issues that are outside the scope of the mandate of a TS. As a consequence, it is essential that other players are pulled into a RALIS exercise, ideally as RALIS team members, who can assume responsibility to pursue proposals that are not related to technology. Such players would, in particular, be business associations / sector associations and public sector business promotion organisations. Moreover, it would be beneficial if in the future a way could be found to not just communicate the findings of a RALIS to provincial and national ministries, but actually to involve representatives from those industries, in particular in cases where a RALIS addresses a sector that ranks high among the policy priorities of, say, the dti.

#### **4.4 Who should explain RALIS?**

When it comes to explaining RALIS to a TS and a university in the future, it would be useful to involve individuals from outside the Tshumisano system. Based on the insight that information received from a peer often enjoys a higher credibility than information presented by a person one has never seen before, this could include

- managers of TS that have successfully conducted RALIS
- university staff who appreciate the value of RALIS (e.g. vice chancellor, dean, professors)
- industrialists who appreciate the value of RALIS

#### **5 Options for improvement of future RALIS Exercises**

Based on the experience with the RALIS Exercises that were conducted so far, we identified a number of options to improve the quality of future exercises. The first three of them related to the build-up phase, the fourth one to the end of the exercise.

1. Assure full participation from university and technology station staff. After a RALIS Exercise, university and TS staff tend to state “I should have emptied my agenda for the period of the RALIS”. Beforehand, though, they suppose that RALIS-related activities can somehow be squeezed in between their other duties. It is important to point out in future cases that this will not work.
  - Related to this, a stronger effort to communicate the RALIS within the TS and the university is needed. The focus of communication is often towards the outside. Communication into the TS and the university is done in a superficial manner, e.g. by just sending out an e-mail. That is not adequate.
2. Check the credibility of the Technology Station as a convenor. Sometimes the TS is aware that its visibility and credibility in industry is limited. In other cases, the TS may harbour under a misapprehension as far as its credibility is concerned. There are organisations and individuals who can shout, and everybody comes. Most TS are not part of this group. Thus, the engagement with stakeholders needs to be carefully planned and competently executed. The following points are essential in this regard:
  - Allocate a dedicated event manager for the whole event. Ideally, this would be the TS manager. Practically, that is unlikely to happen. Nevertheless, it is important that there is one person who is in charge of all the coordination and communication. This is probably going to be a person that is little known among stakeholders,

- Use friends and allies of the Technology Station to approach other stakeholders. The TS should not only rely on formal channels but also, and in particular in a situation of limited credibility, go through personal, informal relationships (based on membership in club, church, school, etc.) in order to identify “connectors” that can open access to other groups of stakeholders.
  - The right person needs to identify and communicate with the stakeholders. A credible private sector person must invite private sector stakeholders, a credible public sector person must invite public sector persons, etc.
  - In the communication with stakeholders the Technology Stations must use the most effective means of communication, rather than the most convenient ones. Sending a mail to establish contact or invite to a workshop is convenient but ineffective. Calling 20 business people is inconvenient but may be effective, especially if they were beforehand approached and informed by a trustworthy peer.
  - Preferable a diverse range of communications must be used. Face-to-face or phone conversation are useful for initial contact, fax, e-mail or letter for subsequent provision of information to invitees, and SMS to remind participants of a workshop date.
3. Assure full participation from other key role players in the innovation system (including clusters and other government-promoted business support programmes, other universities, SETAs). Go beyond the usual stakeholders of the Technology System.
- Do proper mapping of the stakeholder structure in the innovation system already early in the build-up phase. Revisit and update the stakeholder map as you learn about additional stakeholders, and as you start to better understand relationships between stakeholders.
  - Conduct a robust effort to identify ongoing activities in a given sector, in particular initiatives launched by industry associations or government bodies. The additionality and the benefits to be obtained with a RALIS must be explained to those players. They must not get the impression that, through the RALIS, the TS wants to compete with them. Ideally, other players should already start to develop an idea of how the RALIS can help to leverage their initiatives before the launch of the RALIS exercise. In other cases, where initiatives exist on paper only, it might be possible to explore how RALIS can help to get them going.
  - Map not only the innovation system but also the value chain that it relates with (which would work in some cases and be difficult in others, like downstream chemicals). Make sure that stakeholders understand not only the scope and topography of the innovation system they are part of, but also of the value chain they feed into.
4. Manage expectations properly, in particular around proposals. Ideally, proposals should only be mentioned if some player has assumed responsibility for their implementation.

Proposals that are not “owned” by anybody should only be presented if it is very clear that an owner is being sought, and that the TS will definitely not be the owner.

## 6 Introducing additional tools in RALIS

The RALIS exercises that were conducted so far relied primarily on the tools that are outlined in the RALIS documentation, in particular workshops that were structured along the Four-Pillar-Model. Additionally, tools out of the PACA toolbox were used, in particular workshops using the 5 Forces format. What was the benefit of using these tools?

- The Four-Pillar-Model is useful to understand the basic structure of a sectoral or territorial innovation system. It helps the various stakeholders involved in the system to understand how they fit with other stakeholders, and how various stakeholders interrelate to create an effective (or not so effective) system.
- The 5 Forces model is a standard tool in analysing the competitive position of a company or a cluster of companies. It helps to understand their competitive advantages as well as the main challenges they are facing.

Both tools are particularly useful at an early stage of an exploration process, when the picture of the targeted sector or locality and its innovation system is not clear at all. What are their advantages and their downside?

- The advantage of both tools is their robustness in delivering a picture of a given sector or cluster, informing about its basic structure and its degree of competitiveness. They put the importance of technology and innovation as a determinant of the competitiveness of the specific sector and cluster into perspective, i.e. highlight the relevance of these aspects relative to other determinants of competitiveness.
- The downside of both tools is that they do not dig deep into technology and innovation issues. They do not unpack these issues in terms of innovation behaviour, in particular the internal problem solving capacity and behaviour of companies.

So far, the tools we have used have been sufficient. However, as innovation systems evolve – not the least due to the changed behaviour of a TS – or we engage with more sophisticated innovation systems, we will need further tools. Some of them may be adapted from other methods, for instance:

- Scenario writing. This is a tool that has been used in technology foresight exercises for some time.

- Expectation matrix. This is a tool that we use in PACA occasionally to understand the expectations that various organisations with a development mandate have regarding each other's activities, and to understand which expectations are realistic and which are not.
- Paper computer. This is a tool that helps identify interventions in complex systems that have a high leverage factor.

Further tools will be useful, for instance to better understand technology choices and technology development behaviour and patterns. It would be useful if all people involved in RALIS could look out for concepts, frameworks or analytical tools that could be applied during a RALIS, in particular tools that – similar to the 5 Forces model – can easily be turned into a workshop format.

## **7 To do list**

- We need to explain clearer the activities involved in the build-up for a RALIS exercise, including the activities expected from RALIS facilitators. This will help in budgeting the time of RALIS facilitators for the build-up. Activities in the build-up include, but are not limited to, the following:
  - Briefing session with TS staff
  - Stakeholder mapping session
  - Briefing session with facilitators
  - Workshop to define communication approach and plan
  - Briefing session with event manager
  - Verification session with TS staff
- We need to adapt the Build-up Checklist from PACA/Genesis for RALIS.
- We need to clearly define deliverables and milestones in a RALIS build-up.
- We need to check and adapt the RALIS Flyer.
- Identify ways to maximise the benefit of RALIS for Tshumisano staff, for instance by having a project manager “shadow” an experienced RALIS facilitator through an entire exercise.
- The PMU can play an important part in constantly upgrading the skills of not only the Tshumisano staff, but also of Technology Stations and key partners. This could be in the

form of interesting events with interesting speakers, or on the discussion of important policies that influence the work of the stations.

- We need to draw up a menu of typical post RALIS activities that could be used to design the implementation and follow-up process.