

# Institutionalizing **IMPACT** Orientation

Building a performance management approach that enhances the impact orientation of research organizations

## Food Research Institute

### Case study summary

Dr Wisdom Amoa-Awua

Dr Seewu Komla Noamesi

Mr Robert M. Yawson

Mr David Rider Smith

Mr Daniel Ticehurst



Natural  
Resources  
Institute



© The University of Greenwich 2003

The Natural Resources Institute (NRI) of the University of Greenwich is an internationally recognized centre of expertise in research and consultancy in the environment and natural resources sector. The Institute carries out research and development and training to promote efficient management and use of renewable natural resources in support of sustainable livelihoods.

The Performance and Impact Programme (PIP) comprises a group of professionals with substantial experience in the field of Monitoring and Evaluation (M&E). The PIP works with a diverse range of clients, including northern and southern governments, NGOs and bilateral and multilateral donors. We deliver services that:

- provide M&E solutions within complex environments
- offer innovative approaches in response to clients' changing information needs
- build clients' M&E capacity to help them meet emerging programmatic and organizational challenges.

Email: [D.T.R.Smith@gre.ac.uk](mailto:D.T.R.Smith@gre.ac.uk)

Tel: +44-1634-883-948

# Contents

<b>Introduction</b>	<b>iv</b>
<b>Background to FRI</b>	<b>1</b>
<b>Organizational diagnosis</b>	<b>3</b>
Organizational context	3
Organizational capacity	4
Summary of diagnosis	13
<b>Scorecard construction</b>	<b>15</b>
Establishing the organization's goal	15
Developing delivery plans under the scorecard perspectives	17
Mapping objectives	27
<b>FRI summary</b>	<b>31</b>
<b>Acronyms</b>	<b>33</b>

# Introduction

This summary report presents the findings of a collaboration between the Food Research Institute (FRI), CSIR (Ghana) and NRI's Performance and Impact Programme (UK) in building a performance management approach to enhance organizational impact orientation.

As one of three collaborating institutes, the findings documented from FRI's experience represent part of a larger initiative aimed at addressing the concern within public sector agencies of how to demonstrate their achievements in an environment of broad-based public policy reform. This pressure is particularly hard-felt by agricultural research organizations, where funders' perceptions of a lack of evidence for the uptake and impact of products and services are raising questions about their efficacy and existence.

In recognizing that the developmental impact of research is notoriously difficult to assess, the project is predicated on the belief that indicators of organizational uptake can provide reliable proxies, or 'leading' indicators of development impact. This implies that overcoming the lack of connection between research outputs and development impacts should not be pursued through impact assessment studies alone, but through appropriate systems that account for organizational uptake and research outcomes which provide the clearest evidence of likely developmental impact. Thus, building performance management capacity is about developing clear, meaningful and accountable measures of performance over which the actors have direct control, or a manageable interest.

This report summarizes the first phase of this project conducted inside FRI: a diagnostic assessment of organizational context and capacity, followed by the initial steps of developing a performance management approach. The report is a supplementary to the main volume, which presents the process, lessons and outcomes across all three collaborating institutes.

# Background to FRI

The Food Research Institute (FRI) was established in 1963, and incorporated into the Council for Scientific and Industrial Research (CSIR) as one of 13 institutes in 1968. FRI has a mandate to conduct applied research into problems of food processing and preservation, storage, marketing, distribution and utilization in support of the food industry, and also to advise government on its food policy. The institute's mission focuses on providing scientific and technological support to the growth of the food and agricultural sectors in the national economy in line with government policy objectives.

FRI is divided into seven divisions, four of which address technical aspects of food quality and production; microbiology, chemistry and processing/engineering. The remaining three divisions deal with business development, administration and finance. Research programmes and projects fall both within specific divisions (e.g. fats and oils studies, cereal/grain/fish processing studies) and cut across divisions (economic and consumer studies).

The institute has a total of 174 staff, of which 37 are scientists and engineers, 35 senior technical and administrative support staff, and 106 junior members of staff in various supporting roles. The institute has a bipartite structure, with the director directly managing the three non-scientific divisions (and with overall responsibility for all divisions and reporting to the management board), whilst the deputy director manages the four scientific divisions. Quarterly review meetings occur between the divisional managers and the director/deputy director to present progress against objectives on programme initiatives, which in turn is reported by the director to the management board (of which there is a technical sub-committee). A research co-ordinating committee comprising staff from each division appraises proposals for consideration. FRI manages its own finance and reports to the CSIR board on programme/project outputs.

FRI's major achievements include the formulation of composite flours, the development of appropriate technology for micro- and small-scale food processing, the formulation of food standards and the drafting of food laws and regulations with the Ghana Standard Board and the Ministry of Health.

# Organizational diagnosis

This section presents the context and capacity of FRI identified through organizational diagnostic exercises.

## ORGANIZATIONAL CONTEXT

FRI operates research programmes and projects funded by the Government of Ghana and external agencies. The CSIR is funded from the Ministry of Finance, through the Ministry of the Environment, with funds appropriated to each institute on the basis of the number of staff on the payroll. A commercialization programme was established within the CSIR in 1995. It was mandated that by December 2001 the CSIR should generate 30% of its Annual Budgetary Requirement (ABR) and that government support for the CSIR would be slashed by 30%. Current private funding revenue stands at 5.45% of total budgets across the CSIR institutes, due in part to the barrier imposed on institutes which prevents them from bidding for research contracts from donor agencies that are channelled through the Government (seen as a conflict of interests).

FRI is also one of three CSIR institutes engaged in a World Bank-financed private sector development project aimed at building capacity in the commercialization of research through restructuring and commercialization of operations.

The Ministry of Food and Agriculture (MOFA) is the primary ministry responsible for food and agricultural development in Ghana. Whilst MOFA and the CSIR are institutionally separate, the research outputs generated by the CSIR institutes are largely disseminated through MOFA. Research Extension Liaison Committees (RECLs), located in each agro-ecological zone in Ghana, provided a bridge for linking CSIR institutes and MOFA extension, and also links to farmers and policy-makers. The RECLs ceased to exist in 1997/98 when the National Agricultural Research Project (NARP), also funded by the Government of Ghana and the World Bank, officially ended. Since

then, the systematic (formalized) linkage between research and extension has not functioned so effectively. A sector-wide approach to agriculture (AgSIP) is currently being developed under the auspices of MOFA. One aspect of AgSIP is to review research, particularly the role and function that the RECLs played, and whether or not they can be revived. Funding through AgSIP is expected for research, but what form this will take and how accessible it will be to the CSIR institutes has not yet been determined.

Two reviews under the National Institutional Renewal Programme (NIRP) have been conducted within the CSIR over the past year. An externally managed institutional review funded by the Government of Ghana and the World Bank was conducted which suggested that there was a need for considerable restructuring of the research system. This was largely rejected by staff under the CSIR. This has been followed by an internal research review (currently underway), managed from the corporate office of the CSIR, engaging directors from each institute. The aim of this review is to review the corporate mission of the CSIR, identify priority issues, and link these to the CSIR mission. It is expected that by the end of 2002, a strategy will have been developed for rearranging technical services under the CSIR.

## ORGANIZATIONAL CAPACITY

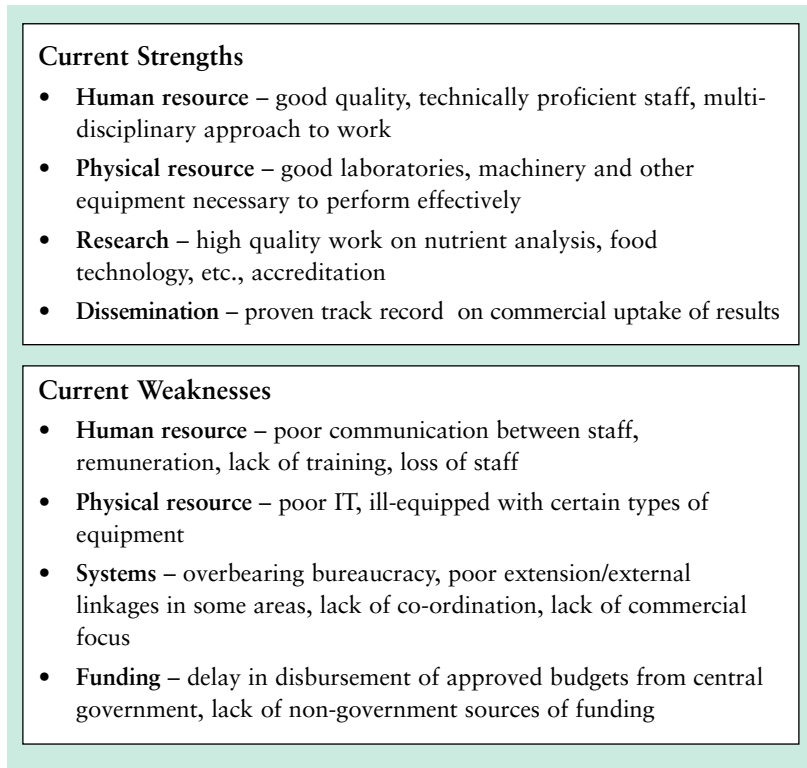
The diagnosis of organizational capacity was conducted through self-identification of institutional strengths and weaknesses, opportunities and threats followed by a review of the mandate, planning and performance structures and processes. Through this review process, the internal drivers and inhibitors are linked to perceived external opportunities and threats.

### Internal strengths and weaknesses

The internal strengths and weaknesses exercise revealed the current state of the mandate, structure and processes within FRI (Figure 1).

As Figure 1 illustrates, FRI's self-identified strengths lie in their technical proficiency, with skilled staff supported by generally good equipment producing high quality outputs. However, whilst multi-disciplinarity was highlighted as a strength, communication and co-





**Figure 1 FRI internal strengths and weaknesses**

ordination were identified as weaknesses within the system. This implies that whilst inter-disciplinarity exists with multi-skilled teams working on projects and programmes, the co-ordination between these team members may be lacking. Further, weaknesses in communication and co-ordination found in the other case study organizations (CRI and NBRP) related specifically to the information flows and feedback between staff and management, rather than across the body of staff.

Dissemination of products and services was highlighted as a strength, whilst the lack of a commercial focus was found to be a weakness. This may reflect the shifting client focus of FRI, which is expanding beyond the traditional market for clients (where strength in dissemination exists) towards a broader (more commercially orientated) set of clients with whom strong links have yet to be established.

## External opportunities and threats

When viewed within the context of external opportunities and threats, the state of FRI's position is made clearer. As Figure 2 illustrates, the demand for FRI's core research is recognized by government, clients and donors. Whilst FRI remains the main source of food research for the public sector, and continues to attract funding to this end, pressure caused by the Government's commercialization programme, fears of privatization, and competition from private research and development companies is affecting the institute. These factors dominate FRI senior staff's perception of the external environment.

### Future Opportunities

- **Research demand** – the food needs of the country require further research that FRI is positioned to provide and are central to some of the Government's priorities (e.g. poverty reduction, food processing)
- **Training demand** – from other agencies and universities in FRI core specialisms
- **Funding** – further funding from external sources, e.g. donors and private agencies, through contracts and collaborative projects based on existing linkages with these agencies
- **Dissemination** – of findings to various constituents

### Future Threats

- **Government funding** – current situation where FRI is expected to attract 30% of funding from other sources – which it has yet to achieve – constrains the ability of the institute to achieve its objectives, there is a fear of budget reductions from the Government
- **Privatization** – fear that FRI will be privatized, with potential staff cuts and associated pressures
- **Commercialization** – too much emphasis being placed on FRI to commercialize is eroding the focus and work patterns of staff
- **Competition** – from other institutes and the private sector
- **Human resource** – brain-drain of staff from FRI into the private sector

Figure 2 External opportunities and threats for FRI

## Organizational diagnosis

External changes are also having an impact internally. ‘Brain-drain’ of staff, combined with current weaknesses of lack of motivation, poor salaries and the like, contribute to the fear that FRI may lose out in the future to competitors if it does not address these issues. However, at present, the benefit of good opportunities for FRI to attract funds to support its work is based on existing strong linkages with clients and donors, and thus off-sets some of the fears about the future sustainability of the institute.

### Client and stakeholder links

A mapping exercise was conducted to look at the type and strength of linkages FRI has with clients and its other stakeholders. This was conducted in response to the recognition that the majority of issues arising from the institutional assessment related to external agents. Within this context, clients are defined as those for whom FRI provides a direct service, other stakeholders are those with whom FRI has some form of linkage.

As Figure 3 illustrates, FRI has numerous clients, ranging from the public to the Government Ministry of Food and Agriculture. Linkages between FRI and several of these clients were considered strong or very strong, including the local food industry, Ghana Standards Board/Food and Drugs Board, entrepreneurs, food processors, students and MOFA. However, whilst these linkages were identified as strong, at the same time, a number of these clients were also perceived to be threats, notably the Ghana Standards Board and private companies who are increasingly working in competition to FRI.

Other stakeholders identified include donors (where the link is very strong) and other government ministries (where the link is fair). Again, whilst a strong link with donors is identified, a threat was also perceived in the erosion of donor funding, and of donor priorities (with increasing emphasis on dissemination rather than research). Weak linkages were identified with NGOs and the public.

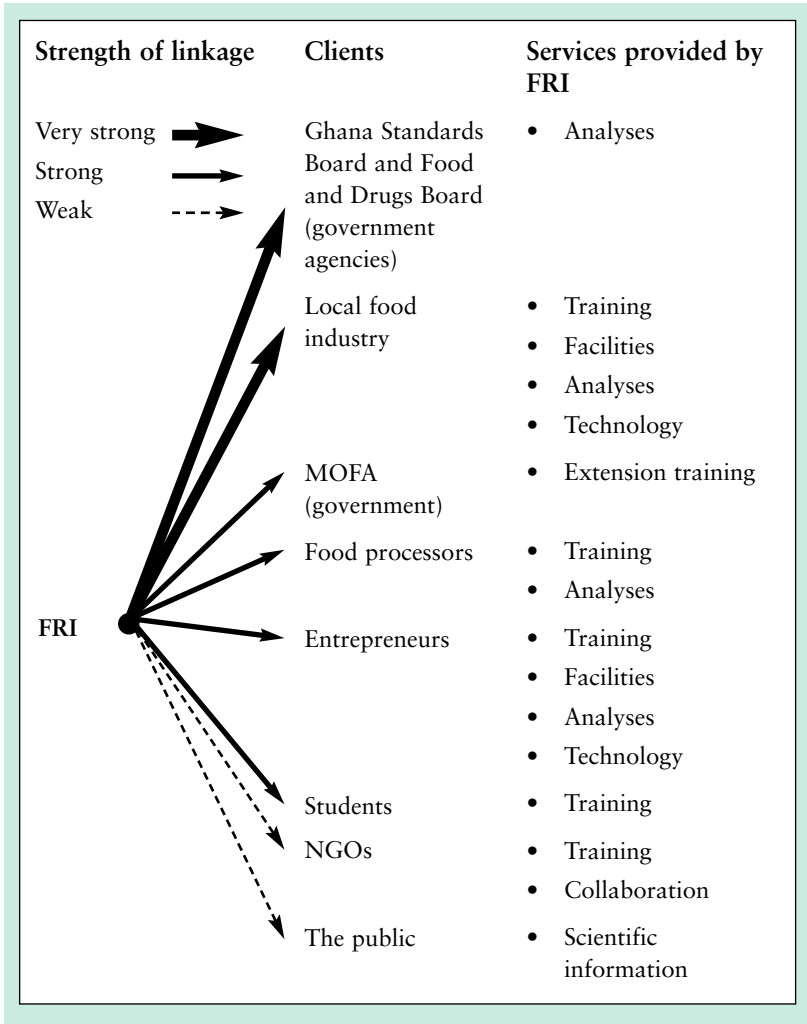


Figure 3 FRI linkages with clients and other stakeholders

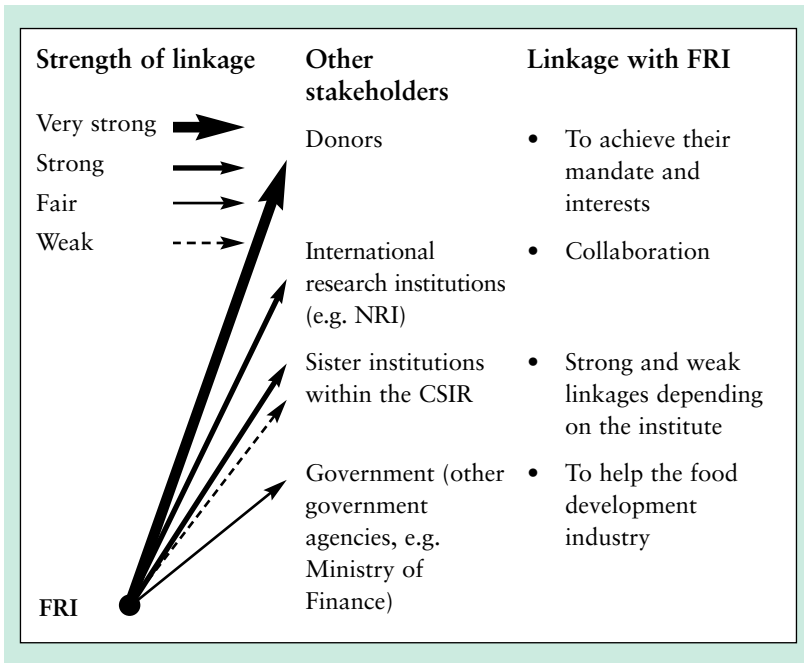


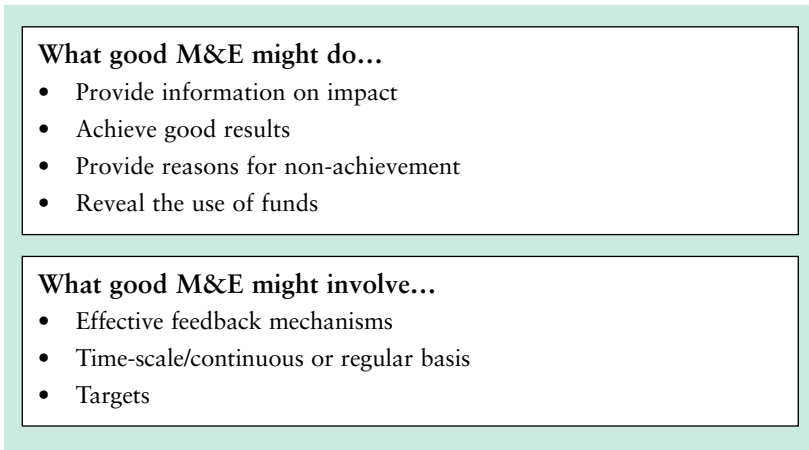
Figure 3 cont.

## Monitoring and Evaluation

FRI's capacity in monitoring and evaluation (M&E) was diagnosed using exercises to reveal the staff's knowledge and perception of M&E within the organization.

*Gauging understanding of M&E:* A brainstorm session on what constitutes good M&E (intentionally left undefined) highlighted various issues which have been grouped into what good M&E might do and what good M&E might involve (Figure 4).

Good M&E was perceived as having a role in providing information on the achievement of good results and reasons for the non-achievement of results. Similarly beyond results, M&E might indicate impact and the effective/efficient use of funds. Effective feedback mechanisms (using clear targets) reviewed in a timely manner were felt to be aspects of a strong M&E system.



**Figure 4 M&E brainstorm**

*Diagnosing M&E capacity:* A self-assessment diagnosis was carried out by each staff member based on rating a series of ‘positively orientated’ statements from ‘strongly disagree’ to ‘strongly agree’ in the context of FRI (Table 1).

The results of the self-assessments were accumulated and grouped into three categories: the M&E system, internal focus and external focus. Where the majority of responses were positive, these were considered ‘strengths’, where negative they were considered ‘weaknesses’. Where opinion was split, a third category was formed (Figure 5).

Having compiled the results, the following key issues were highlighted and discussed.

*The M&E system:* The diagnosis identified a considerable strength in the design and functioning of the M&E system. The majority of staff<sup>1</sup> felt that the system was strategically developed (rather than having evolved by chance), that it reflects a balance of performance measures (measuring both internal operations and output delivery) and that it does not produce more paperwork than is necessary. Contrary to this, questions were raised as to whether or not the right things were actually being measured and, therefore, whether or not the right type of information was available when needed. This conflict was highlighted by the fact that opinion was split over whether or not

**Table 1. Monitoring and evaluation capacity self-assessment**

**ASSESSMENT CRITERIA**

**M&E system**

- 9. Senior management built our M&E system with a plan – it did not evolve by chance
- 10. Our M&E system contains a 'well-balanced' set of measures that reflects the different levels of objectives in our strategic plan
- 2. Our current M&E system measures all the right things
- 6. Our system always gives us the information we need when we need it
- 12. We have a way of summarizing all our outputs easily
- 4. Our M&E system does not produce more paperwork than is necessary

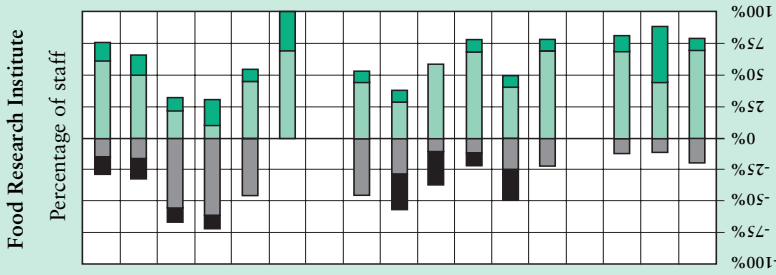
**Internal utilization**

- 15. We act on results quickly
- 8. Everyone in our organization understands the measures used to assess performance
- 3. Responsibilities for assessing different measures are clearly defined
- 5. Results from our M&E system inform decisions on budgetary allocations
- 7. We are only accountable for measures over which we have control

- 13. We pay as much attention to the non-financial measures as we do the financial measures

**External focus**

- 1. We define our measures from the communities' point of view
- 11. We assess client satisfaction of the outputs we deliver with and for them
- 14. We track performance for internal operations as well as the delivery of outputs



Note: The results focused only on the positive and negative responses to the statements, omitting the 'neither agree nor disagree'. In discussion, and through reviewing the explanatory comments made on the self-assessment forms, it was recognized that in many cases those who marked as such did so because they did not fully understand the statement.

Strengths	Weaknesses
<p data-bbox="256 234 397 261"><i>M&amp;E system</i></p> <ul data-bbox="256 269 686 490" style="list-style-type: none"> <li data-bbox="256 269 686 331">• The system was developed with a plan in mind, rather than evolving by chance</li> <li data-bbox="256 340 686 419">• The system provides a well-balanced set of measures reflecting different levels of objectives in the strategic plan</li> <li data-bbox="256 428 686 490">• The system does not produce more paperwork than is necessary</li> </ul>	<p data-bbox="724 234 865 261"><i>M&amp;E system</i></p> <ul data-bbox="724 269 1000 472" style="list-style-type: none"> <li data-bbox="724 269 1000 340">• The system does not measure the right things</li> <li data-bbox="724 349 1000 472">• The system does not always give the right information, when it is needed</li> </ul>
<p data-bbox="256 525 397 552"><i>Internal focus</i></p> <ul data-bbox="256 560 667 807" style="list-style-type: none"> <li data-bbox="256 560 667 622">• Responsibilities for assessment clearly defined</li> <li data-bbox="256 631 667 693">• Results from the M&amp;E system inform budgetary decisions</li> <li data-bbox="256 702 667 728">• Outputs are easily summarized</li> <li data-bbox="256 737 667 807">• As much attention is paid to non-financial measures as financial ones</li> </ul>	
<p data-bbox="256 843 403 869"><i>External focus</i></p> <ul data-bbox="256 878 683 1151" style="list-style-type: none"> <li data-bbox="256 878 683 940">• Measures (indicators) are defined from the communities (clients) point of view.</li> <li data-bbox="256 949 683 1072">• Client satisfaction with the outputs delivered with and for them is assessed, reflecting good linkages and understanding of client needs</li> <li data-bbox="256 1081 683 1151">• Internal performance as well as the delivery of outputs are tracked</li> </ul>	
<hr/> <p data-bbox="326 1178 926 1204"><b>Split opinion (between relative strengths and weaknesses)</b></p>	
<p data-bbox="256 1231 397 1257"><i>Internal focus</i></p> <ul data-bbox="256 1266 997 1434" style="list-style-type: none"> <li data-bbox="256 1266 997 1328">• Whether or not everyone is accountable only for the measures under their individual control</li> <li data-bbox="256 1337 997 1398">• Whether or not everyone in the organization understands the measures used to assess performance</li> <li data-bbox="256 1407 997 1434">• Whether or not everyone acts on results quickly</li> </ul>	

**Figure 5 FRI current strengths and weaknesses in monitoring and evaluation**



## Organizational diagnosis

everyone in the organization understands the measures used to assess performance, and whether accountability to these measures is clearly delineated. These findings suggest that whilst a system is functioning within FRI, the majority of senior staff do not feel it serves the best purpose.

*External focus: linkages with clients:* Strong client and stakeholder linkages (identified through the mapping exercise) are supported by strong feedback mechanisms with these same groups. It was shown in the M&E diagnosis that the majority of staff believe that measures are defined from the clients' point of view (community client group), and that client satisfaction is assessed.

## SUMMARY OF DIAGNOSIS

FRI is currently in a state of flux; a public institute located within a large council of research institutes with a public-service mandate, but increasingly linked to the commercial sector, and with pressure to become more commercially orientated. This is further complicated by the nature and amount of funds divested from central government, and the upstream shift of donor funding through central ministries.

This complex institutional environment is causing the institute to reconsider its internal structure and systems to best position itself to function effectively and serve these diverse client groups. This is reflected in the understanding of the M&E function within the institute; on the one hand it is working effectively within the nature of FRI's traditional core business activities and internal systems, on the other, there is doubt as to whether or not it is still asking and answering the right questions. Further, as FRI's mandate broadens, the impact expected is also being pushed into areas potentially beyond its direct control. This cause for concern is reflected in the doubt over whether FRI is accountable only for measures directly under its own control.

FRI's current reality, and a consideration of future opportunities and threats, has heightened the realization of the need for effective performance management. The need for a clear goal, objectives, indicators and strong feedback mechanisms linked to diverse client and stakeholder groups is matched by the need to ensure that staff within the institute are informed of these changes, and likewise, that

management are aware of staff needs. In this context, the reconsideration of its corporate framework to help staff and investors, the institute's performance, and the development of a more consistent and commonly understood basis with which to monitor and evaluate the institute's work are areas identified as opportunities to pursue.

## NOTES

<sup>1</sup> A case is being made that research funding should be centralized, and apportioned on the basis of achievement rather than on staff numbers.

<sup>2</sup> Thirteen senior scientists participated in the M&E diagnostic self-assessment exercise (representing over 50% of FRI's staff at this level).

# Scorecard construction

Scorecard construction took place during a workshop held in Ghana in July 2002. A series of exercises was carried out through the workshop to build performance management using the balanced scorecard approach. This involved reviewing the corporate goal and building sub-systems around the four perspective of the scorecard: employee, internal business, client/stakeholder and financial. Review, consultation and construction of the performance management sub-systems for each perspective drew heavily on the findings of the organizational diagnosis. The results of these exercises for FRI are described below.

## ESTABLISHING THE ORGANIZATION'S GOAL

A strong performance management system relies upon a shared understanding of a common goal. It was, therefore, considered essential early on in the Stage I diagnostic needs assessment to ascertain whether or not a jointly held goal exists. This was achieved through an exercise to review individual staff's understanding of the organization's goal, their contribution to this goal, and how that contribution is measured. During the Stage II workshop, FRI representatives reviewed these findings as a basis for revising their organizational goal.

*Revisiting the organization's goal:* Differences in individuals' understanding of the goal of FRI reflected differing expectation of what the institute may be able to achieve. This ranged from conducting efficient and profitable research to improving the food security of the country. Two main themes came out of identifying the goal of the institute: firstly, that the focus is increasingly on commercially focused research, and secondly, that the role of FRI is to support the food industry in its various forms.

*Individuals' contribution (including assessment of the contribution) to the organization's goal:* Individuals' perception of their

contribution to the organization's goal, and how this contribution is measured, were also assessed through the same exercise. Some individuals found it difficult to distinguish between describing what they do (i.e. their day-to-day activities) and how what they do contributes to the overall goal of the organization. This may reflect a lack of sense of mission, i.e. what is the individual's contribution to an overall goal.

Considerable variations were found in the ways in which individuals' contributions to the goal are measured. Two issues arise from this. First is the extent to which measurements accurately reflect the work in which individuals are engaged. For example, one individual is conducting studies in contributing to the goal of the institute, and this is measured by improvement in the income levels of clients. A disjuncture appears here; one is not measuring the other. Second is the question which of these measures are most important at the institutional level to best represent the institute to its clients, i.e. to best demonstrate the achievements of FRI.

*Revising the organization's goal:* Through this exercise, it was recognized that FRI needed to reconsider its goal, how individuals' outputs directly contribute to this goal, and how best these contributions can be assessed. The perceived benefit of conducting an exercise was to get a common sense of purpose, improved understanding of others' work areas, and where the linkages exist between work areas.

Through a group-based review of the various individual perspectives, and the use of guidance material, consensual agreement was reached:

#### **Food Research Institute Goal**

To be a centre of excellence that conducts market-orientated research and provides accredited technical services to the food industry by 2008.

## DEVELOPING DELIVERY PLANS UNDER THE SCORECARD PERSPECTIVES

Delivery plans were developed by FRI for two of the four scorecard perspectives. The exercises followed (detailed in main volume) led the FRI team through a five-part methodology: formulating objectives for each perspective; identifying key performance indicators for each objective; reviewing existing M&E activities under the priority objectives; identifying critical success factors and developing draft delivery plans. The results of this process are presented per scorecard perspective.

### Developing the employee perspective

*How can we continue to improve and create value?*

Clarifying or defining objectives in this perspective involve reflecting on the performance of internal employee-related processes that drive the organization, including forward-looking targets for continual improvement. Without employee ‘buy-in’, FRI’s achievements are likely to be minimal. This is of particular relevance in an environment where (i) other agencies (e.g. universities and NGOs) are attracting able employees away from the public sector to potentially more lucrative jobs, and (ii) where donors are looking to invest in attractive, growing organizations.

A number of key issues were identified from the organizational diagnosis.

- Good quality, technically proficient staff were identified as one of the key strengths of FRI. However, key weaknesses reflected poor communication between staff and poor remuneration leading to a lack of motivation. One or more of these factors has resulted in the ‘brain-drain’ of staff away from FRI to the private sector and other institutions. This ‘brain-drain’ is also perceived to be a big threat for the future of FRI.
- A lack of consistency in understanding was highlighted in the self-assessment exercise, with individuals unclear about the measures used to assess performance. Whilst the promotion process is clear, the measures used to assess institutional performance (and thus a sense of common purpose) are not.

- If FRI is to continue to strive to be the front-running institution in food research, it is crucial that it retains its self-identified most valuable resource – its staff.
- Central to this is a clarification of purpose, strengthened by good communication between staff and a feeling of self-worth. Identifying and illustrating the achievements of individuals, and how their work relates to the work of others in view of the goal of the institute will help to achieve this.

Figure 6 illustrates the objectives and key performance indicators developed by FRI.

Objective	Key Performance Indicator
1. Trained and focused staff	<ul style="list-style-type: none"> <li>• X% of research scientists have Ph.D. degrees by 2008</li> <li>• X% of technicians have at least Higher National Diploma by 2008</li> <li>• At least X% of scientific and support staff understand their duties and responsibilities</li> </ul>
2. Requisite facilities in place	<ul style="list-style-type: none"> <li>• Equipment for carrying out X number of different analyses available by 2008</li> </ul>

**Figure 6 Employee perspective**

The two objectives focus upon two facets considered to be imperative in understanding and thus improving employee satisfaction with work and the workplace, and thus increase the likelihood of retaining high quality staff and maintain the research standard. The criteria developed for measuring the ‘trained and focused staff’ objective stress academic training (as both a need to maintain high quality research, and as a credit to attract and maintain interest in individuals who want to improve their qualifications). Further, the measure focused on understanding of duties and responsibilities implies the need for a clear and coherent strategy through which all staff (scientific and

support) understand their role and function. Less emphasis has been placed on the need for improved communication and feedback amongst staff, and between staff and managers, although this was identified as a weakness during the diagnostic exercise.

The building of a performance management delivery plan to address these objectives would focus on identifying what is currently being done by FRI in these areas and, within this context, consider critical factors to ensure the success of the objectives in question, and thus the organization's goal. However, this perspective was not prioritized by FRI representatives at the workshop, and due to limited time, no delivery plans were developed.

### Developing the internal business perspective

*To satisfy our clients, at what internal business processes should we excel?*

The objective of this perspective is to link the client/stakeholder perspective with the internal actions and perspective of those responsible for meeting contractual obligations and fulfilling mandates. A number of issues were identified during the diagnosis which FRI representatives considered in developing the delivery plan for this perspective.

- Effective feedback mechanisms were highlighted as a weakness in the diagnosis ('not always getting the information that is needed, when we need it'). Thus, while FRI has strong linkages with clients and a strong staff base, the implication is that business processes are not necessarily reflecting client or stakeholder needs in the most effective way. This was reflected in comments on the existing internal weaknesses at FRI, including poor communication between staff and lack of motivation (in some cases), perhaps reinforced by a lack of common purpose reinforced by projectization.
- In terms of FRI's relationship with its client base, an imbalance was identified between the importance attached to identifying the needs of end users, on the one hand, and understanding and being able to respond to the needs of other client groups on the other. In view of the shift in FRI's client base towards the private sector, and a

changing relationship with government and donors, FRI recognizes the necessity of having a research focus and processes that reflect these needs.

Figure 7 illustrates the objectives formulated and the performance indicators selected to address these issues. As the objectives demonstrate, the principal focus within this perspective has been to consider the extent to which FRI's internal business processes both reflect and address the demand for their services.

Two of the objectives focus specifically on the research process, two on service delivery. The key performance indicators reflect differing sources of validation, ranging from internal standards (technologies developed, results released), peer review (journal publications) and certified standards (patents and audits).

Objective	Key Performance Indicator
1. Quality research carried out	<ul style="list-style-type: none"> <li>• X number of publications in international journals</li> </ul>
2. Demand-driven technologies developed	<ul style="list-style-type: none"> <li>• X number of appropriate technologies developed</li> <li>• X number of patents</li> </ul>
3. Quality service delivered to clients	<ul style="list-style-type: none"> <li>• X number of queries raised by internal audit of laboratory procedures</li> <li>• X% of FRI analytical results sent for verification confirmed by reputable accredited laboratories</li> </ul>
4. Services timely delivered to clients	<ul style="list-style-type: none"> <li>• X% of FRI analytical results released to clients on schedule</li> </ul>

**Figure 7 Internal business perspective**

The draft delivery plan drafted to address the specific objective 'demand-driven technologies developed' reflects both the existing and required steps that need to be taken (Plan 1). The approach taken in



Plan 1 Draft delivery plan for internal business perspective at the FRI		What M&E are we already doing to assess this?	Current frequency	M&E need	By whom?
Level	What are we already doing?	What M&E are we already doing to assess this?	Current frequency	M&E need	By whom?
Objective	Demand-driven technologies developed				
Key performance indicators	X number of appropriate technologies developed X number of patents				
Outputs	<ul style="list-style-type: none"> <li>█ Highly skilled staff</li> <li>█ Manuals on available technologies</li> <li>█ Patents</li> <li>█ Technologies commercialized</li> </ul>	<ul style="list-style-type: none"> <li>█ Training needs assessments</li> <li>█ Staff appraisals</li> <li>█ Staff promotions</li> <li>█ Monitoring of clients using manuals</li> <li>█ Nil</li> <li>█ Market survey</li> </ul>	<ul style="list-style-type: none"> <li>█ Annually</li> <li>█ Nil</li> <li>█ Nil</li> <li>█ Nil</li> <li>█ Annually</li> <li>█ Annually</li> <li>█ Annually</li> <li>█ Quarterly</li> <li>█ Nil</li> <li>█ Nil</li> </ul>	<ul style="list-style-type: none"> <li>█ Annually</li> <li>█ Annually</li> <li>█ Annually</li> <li>█ Bi-annually</li> <li>█ Annually</li> <li>█ Annually</li> <li>█ Annually</li> <li>█ Quarterly</li> <li>█ N/A</li> <li>█ Monthly</li> </ul>	<ul style="list-style-type: none"> <li>█ Administration Head</li> <li>█ Client Service Unit</li> <li>█ Client Service Unit</li> <li>█ Client Service Unit</li> <li>█ Management</li> <li>█ Management</li> <li>█ Council</li> <li>█ Publications Unit</li> <li>█ Client Service Unit</li> </ul>
Processes (activities)	<ul style="list-style-type: none"> <li>█ Specialized training for staff</li> <li>█ Documentation of technologies</li> <li>█ Preparation of technology manuals</li> <li>█ Market surveys</li> </ul>	<ul style="list-style-type: none"> <li>█ Training needs assessments</li> <li>█ Staff appraisals</li> <li>█ Staff promotions</li> <li>█ Periodic staff audit</li> <li>█ Nil</li> <li>█ N/A</li> </ul>	<ul style="list-style-type: none"> <li>█ Annually</li> <li>█ Annually</li> <li>█ Annually</li> <li>█ Quarterly</li> <li>█ Nil</li> <li>█ Nil</li> </ul>	<ul style="list-style-type: none"> <li>█ Annually</li> <li>█ Annually</li> <li>█ Annually</li> <li>█ Quarterly</li> <li>█ N/A</li> <li>█ Monthly</li> </ul>	<ul style="list-style-type: none"> <li>█ Management</li> <li>█ Management</li> <li>█ Council</li> <li>█ Publications Unit</li> <li>█ Client Service Unit</li> </ul>
Inputs	<ul style="list-style-type: none"> <li>█ Funds/staff/equipment/research methods</li> </ul>				

developing the delivery plan was iterative, reformulating the framework to suit the process of illustrating existing activities and systems, and determining requirements. Thus, existing M&E activities are noted alongside required activities, indicated by whether they are recorded in the ‘current frequency’ column or not. Whilst the internal processes are currently reasonably strong, the gaps identified relate to feedback mechanisms: knowledge of clients’ utilization of products and services, and clients’ perceptions of FRI’s products, services and delivery process.

## Developing the client/stakeholder perspective

### *How do we appear to our clients?*

This perspective considers the organization’s performance through the eyes of a client or stakeholder, so that the institution retains a careful focus on client or stakeholder needs and satisfaction.

The following issues were identified during the diagnosis and were considered in the development of the delivery plan.

- FRI has numerous client groups and stakeholders. Links to several of these clients are strong, implying good feedback mechanisms with FRI understanding the needs of these groups, and conversely, these groups appreciating the services or products delivered by FRI. However, a number of these clients were also perceived to be threats. A fear was also expressed about the need to be increasingly commercial within FRI in terms of attracting funds and being attractive to clients.
- A similar pattern was found with other stakeholders, notably donors (where the link was identified as very strong) and other government ministries (where the link is fair). The strong link with donors was counteracted by the perception that donor funds are diminishing, or being re-directed through MOFA, which presents barriers to access, and that donor priorities are shifting away from research towards dissemination which challenges FRI’s role and management.
- There appears to be an opportunity for FRI to better position itself with respect to its clients and stakeholders. Whilst strong linkages exist, FRI is facing increasing pressure to commercialize, and is

finding itself in competition with other institutions working in the same field.

- Thus, for FRI to remain at the forefront of the food research industry, favoured by the clients of its research, a number of key questions need to be considered: (i) how does FRI want clients/stakeholders to view it?; (ii) has the design of existing monitoring activities incorporated client/stakeholder input?; (iii) do the existing measures for M&E and reporting reflect the expectations of varying clients/stakeholders (e.g. provide relevant, accessible, accurate, clear and timely information)?
- A further issue to be considered is how FRI addresses its weaker linkages; the public (what else other than the provision of scientific information is important?), and the NGOs (as a potential source of collaborative work).

Figure 8 illustrates the objectives and key performance indicators developed by FRI in the client/stakeholder perspective. The objectives developed reflect a desire to be identified by existing and potential

Objective	Key Performance Indicator
1. Clients satisfied with technologies developed	<ul style="list-style-type: none"> <li>• X% of technologies adopted</li> </ul>
2. Accredited service provider	<ul style="list-style-type: none"> <li>• X number of analytical methods accredited to ISO 17025</li> </ul>
3. Reliable services provided	<ul style="list-style-type: none"> <li>• X% of clients satisfied with timeliness, responsiveness and quality of service</li> <li>• X% of major clients retained</li> <li>• X number of complaints in a year</li> </ul>
4. Cost-effective services provided	<ul style="list-style-type: none"> <li>• X% of FRI charges competitive with charges of similar laboratories</li> </ul>

Figure 8 Client/stakeholder perspective

clients as a provider of reliable and cost-effective products and services. The measures of this performance are several: accreditation, technology adoption, client satisfaction (timeliness, responsiveness and quality) and cost. Thus, FRI has made it clear that for clients to be satisfied with its performance, several different but complementary measures are required.

A draft delivery plan was developed for the second objective: to be an accredited service provider (Plan 2). The plan developed represents an initial framework for considering the type of critical factors that need to be achieved if the objective is to be satisfied. It is recognized that this is not a timebound objective in itself, but requires continual actions to maintain this standard, highlighting the importance of mechanisms for reviewing progress towards, and maintenance of this standard as one of four objectives in the client/stakeholder perspective.

The further development of this, and other delivery plans (for the other three objectives in the client perspective) may make it necessary to review the objectives (to reflect on whether or not they aid FRI in achieving its goal) and key performance indicators, to ensure that they suit the criteria of effectively measuring the objective. Addressing the other objectives may require a delineation of the client and stakeholder groups, recognizing that the nature of the products and services provided and the linkages vary accordingly.

## Financial perspective

*To succeed financially, how should we look to donors, government and investors from the corporate sector?*

The diagnosis highlighted several issues relating to FRI's financial sustainability, and possible approaches to better position itself in this regard.

- The pressures on FRI's finances come from both the drive to be more commercially orientated, thus seeking clients and linkages with industry or the private sector more broadly, and due to disbursement difficulties from central government coupled with the re-routing of donor funds through central government agencies.

Plan 2 Draft delivery plan for client perspective at FRI		To achieve this objective, what has got to happen (critical success factors)?	By when?	By whom?
Level	What are we already doing?	What M&E are we already doing to assess this?	Already	Require
Objective ▲	Accredited service provider			
Key performance indicators	X number of analytical methods accredited to ISO 17025			
Outputs	<ul style="list-style-type: none"> <li>■ Trained staff in ISO 17025</li> <li>■ Quality manual produced</li> <li>■ Methods manual produced</li> <li>■ Procedures/instructions</li> <li>■ Calibrated equipment</li> <li>■ Proper documentation</li> </ul>	<ul style="list-style-type: none"> <li>■ Periodic internal audit</li> </ul>		
Processes (activities)	<ul style="list-style-type: none"> <li>■ Engage consultant</li> <li>■ Staff training</li> <li>■ Write quality manual</li> <li>■ Write other manuals</li> <li>■ Prepare forms/documentation</li> <li>■ Audit procedures</li> <li>■ Implement procedures</li> <li>■ Calibrate equipment</li> </ul>	<ul style="list-style-type: none"> <li>■ Periodic internal audit</li> </ul>	<ul style="list-style-type: none"> <li>1. Once</li> <li>2. None</li> <li>3. None</li> <li>4. None</li> <li>5. None</li> </ul>	<ul style="list-style-type: none"> <li>1. Quarterly</li> <li>2. Annually</li> <li>3. Bi-annually</li> <li>4. Bi-annually</li> <li>5. Bi-annually</li> </ul>
Inputs	<ul style="list-style-type: none"> <li>■ Funds</li> <li>■ Consultant</li> <li>■ ISO 17025 standard</li> <li>■ Metrology units</li> <li>■ Staff</li> <li>■ Laboratory methods</li> <li>■ Equipment</li> </ul>	<ul style="list-style-type: none"> <li>■ Staff</li> <li>1. –</li> <li>2. –</li> <li>3. –</li> <li>4. n person/hours</li> <li>5. –</li> </ul>	<ul style="list-style-type: none"> <li>Resources</li> <li>1. Cedis n</li> <li>2. Cedis n</li> <li>3. Cedis n</li> <li>4. Cedis n</li> <li>5. Cedis n</li> </ul>	<ul style="list-style-type: none"> <li>1. Quarterly</li> <li>2. Annually</li> <li>3. Bi-annually</li> <li>4. Bi-annually</li> <li>5. Bi-annually</li> </ul>
Are we doing things right?				<ul style="list-style-type: none"> <li>1. Ghana Standards Board</li> <li>2. FRI</li> <li>3. UK</li> <li>4. FRI</li> <li>5. FRI</li> </ul>

- Internal and external competition for resources has re-emphasized the need for strong internal systems (efficient use of resources, transparent financial procedures) and improved relationships and understanding of clients and key funding stakeholders.
- There is a need for a corporate framework or basis through which to help FRI staff as well as its investors better understand its overall performance and impact if it is to attract funding on a more equally defined basis. This may include, for example, mechanisms for providing feedback to government about how its policies affect the work of FRI and its commercialization drive.

Figure 9 illustrates the objectives and key performance indicators developed by FRI in the financial perspective.

Objective	Key Performance Indicator
1. Resources efficiently utilized	<ul style="list-style-type: none"> <li>• Statements of account submitted on schedule</li> <li>• X number of audits raised on statements of accounts by external auditors and donors</li> </ul>
2. Finances transparently managed	N/A

**Figure 9** Financial perspective

FRI considered the financial perspective from an internal systems viewpoint, focusing upon the utilization and management of financial resources. As an approach, this differed from a number of the other case study organizations, which viewed it in terms of how their institute relates to financial stakeholders (government, donors and paying clients).

The perspective chosen by FRI is based on the understanding that a sound financial system provides both a good internal view of the state of the institute, and thus can be presented to financial donors as evidence of its strength. Whilst this approach does not directly address the constraints identified, it is expected that the indicators developed will be utilized within a broader framework which reviews the relationship

between funders and FRI. A draft delivery plan has yet to be developed for this perspective due to time constraints during the workshop.

## MAPPING OBJECTIVES

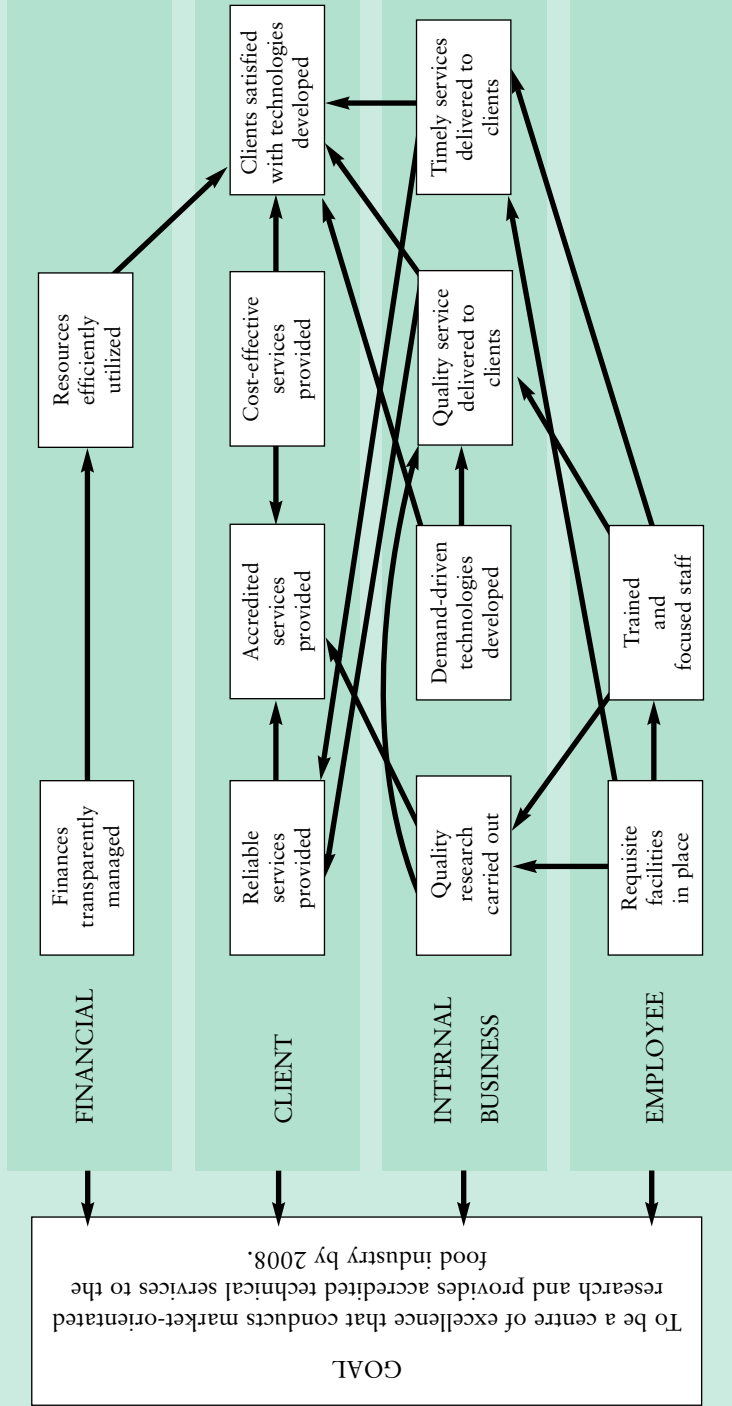
The strength of the balanced scorecard approach lies not only in the consideration of independent perspectives of organizational performance, but also in the interdependence of these perspectives and their contribution to the organization's goal. The mapping of objectives – looking at cause-and-effect relationships – visualizes how the objectives are linked.

An objective mapping exercise was conducted at the end of the workshop using CRI as an example of how cause-and-effect relationships can be analysed and charted. The map (Figure 10) is a first attempt at identifying some of these cause-and-effect linkages at the objective level for FRI. As Figure 10 illustrates, numerous potential linkages exist from the lowest level of the scorecard – the employee perspective – up to the third tier – the client perspective. The internally systemic nature of the financial objectives selected mean that they link across to the goal of the institute, and down to one of the objectives at the client/stakeholder level – clients satisfied with technologies developed.

To review the coherence and consistency of the organizational chart, a snapshot has been taken to look at both objectives and key performance indicators (Figure 11). This snapshot of FRI's mapped objectives rests on a series of cause-and-effect assumptions; namely that if staff are trained and focused, they will produce high quality research delivered to clients, who in turn will be satisfied with the products. Whilst this is somewhat linear and simplistic, it serves two purposes. Firstly, it tests the assumptions on which the linkages are based, ensuring that the theory behind achieving a particular objective through certain actions (critical success factors) holds true. Secondly, it enables a consideration of how best the goal of the institute can be achieved, i.e. what other things may need to happen.

Key performance indicators have a crucial role to play as measures of the success of each objective, and as indicators of the likelihood of the linked objective being met. Having established and tested the key

Figure 10 Mapping objectives across the perspectives – Food Research Institute





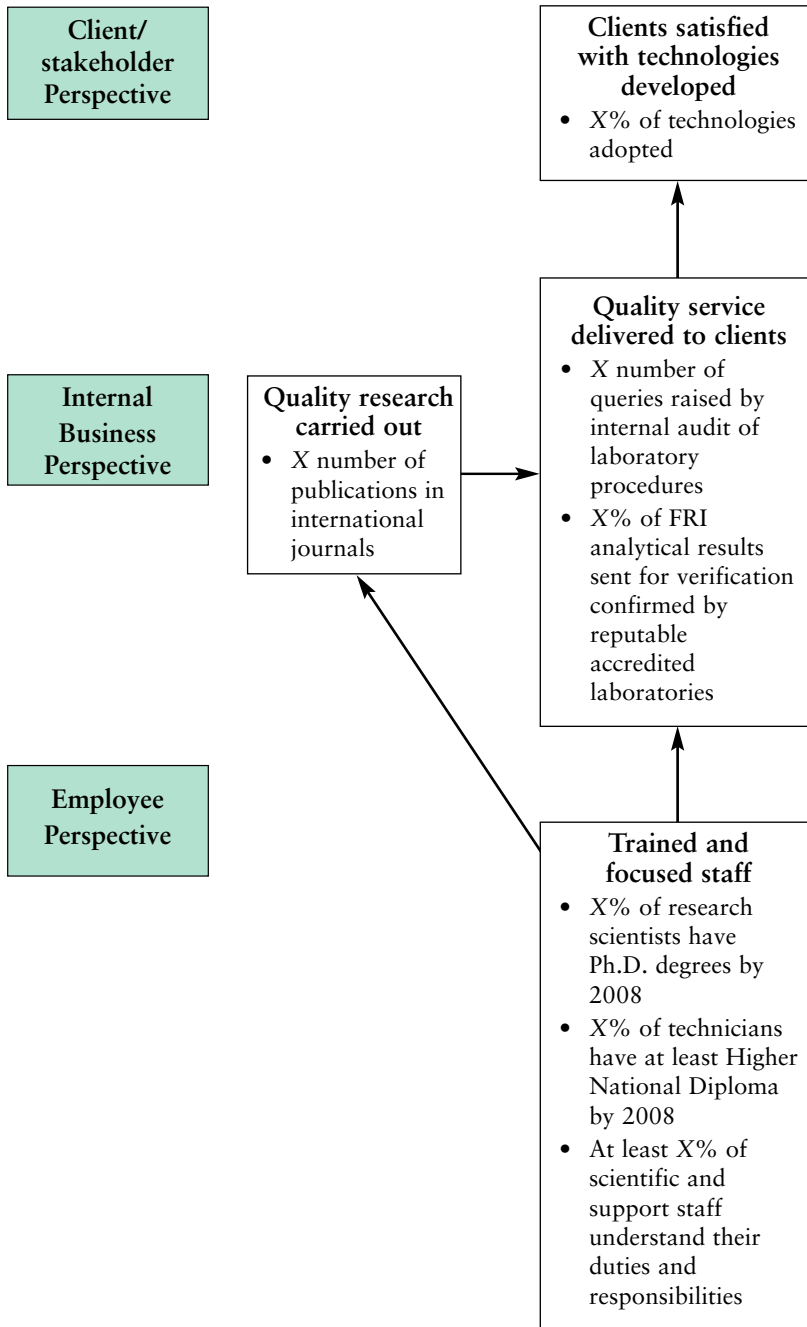


Figure 11 Snapshot of the objective-mapping exercise illustrating key performance indicators

linkages between objectives, it may be necessary to review the indicators, to see whether or not they effectively fulfil this function. If not, they may need to be adjusted or added to, or it may be considered appropriate to develop some extra key performance indicators to look at the interface between one or more objectives.

In this snapshot, current key performance indicators do not reflect these linkages, but have been designed to measure only the objective in question. The next step, therefore, may be to consider, for example, one or more critical indicators for measuring the cause-and-effect relationship between quality service delivered to clients and clients satisfied with technologies (how are client views incorporated into the process?). Whilst this approach does not rely solely upon linkages across the perspectives (each in its own right contributing to the organizational goal), where linkages are deemed to exist, the measurement of these linkages will enable assessment of progress.

# FRI summary

The following summary presents the main issues identified through the organizational diagnosis, the steps taken using the scorecard construction process, and the perceived value added of the project as a whole.

The **organizational diagnosis** identified:

- certain inherent weaknesses within the system at the organizational level – poor communication between staff, appropriate information not always available, burdensome bureaucracy
- certain strengths within the system at the organizational level – high quality staff and (in-general) equipment, good internal systems for measuring the research process
- the need to have systems that are sufficiently robust to incorporate a better understanding of the external environment (clients and donors) into the internal processes of the institute.

**Utilizing the scorecard approach** enabled:

- the reconfiguration of existing activities under the framework of the balanced scorecard – namely, a review of the organization's goal to accurately represent the work and aims of the institute, objectives and indicators to achieve this goal, and drafted delivery plans to achieve some of these objectives
- the identification of areas that have not received attention previously – notably the selection of various measures to assess performance against key objectives (e.g. internal business perspective).

**Added value** from this project included:

- clarification of current capacity and issues, potential opportunities and threats which reflect the existing capacity and utilization of systems within FRI
- utilization of a framework for facilitating a broader understanding of organizational performance

- development of corporate objectives and indicators that aim to bring together the core work areas of the institute
- identification of critical success factors for achieving these objectives in view of what is currently being done in these areas; identifying current M&E activities in these areas; revealing gaps to be addressed through delivery plans.

# Acronyms

<b>ABR</b>	Annual Budgetary Requirement
<b>AgSIP</b>	Agricultural Services Sector Investment Programme
<b>CRI</b>	Crops Research Institute
<b>CSIR</b>	Council for Scientific and Industrial Research
<b>FRI</b>	Food Research Institute
<b>M&amp;E</b>	Monitoring & Evaluation
<b>MOFA</b>	Ministry of Food and Agriculture
<b>NARP</b>	National Agricultural Research Project
<b>NBRP</b>	National Banana Research Programme
<b>NGO</b>	Non-governmental Organization
<b>NIRP</b>	National Institutional Renewal Programme
<b>RECL</b>	Research Extension Liaison Committee