VERSION 3.1

THE KATIBEH

PHANOUS RESEARCH AND INNOVATION CENTRE

PUBLISHED BY PHANOUS RESEARCH AND INNOVATION CENTRE

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TUFTE-LATEX.GOOGLECODE.COM

Prepared with the deepest love for our country, Iran

Contents

About this R&D strategy plan

This is the master document which is intended to regulate most of the proceeding internal and external processes at Phanous Research and Innovation Centre . The intention is to create a single source of reference for decision making with respect to the management of Phanous Research and Innovation Centre . The document will be completed over time with feedback received from implementation of planned policies.

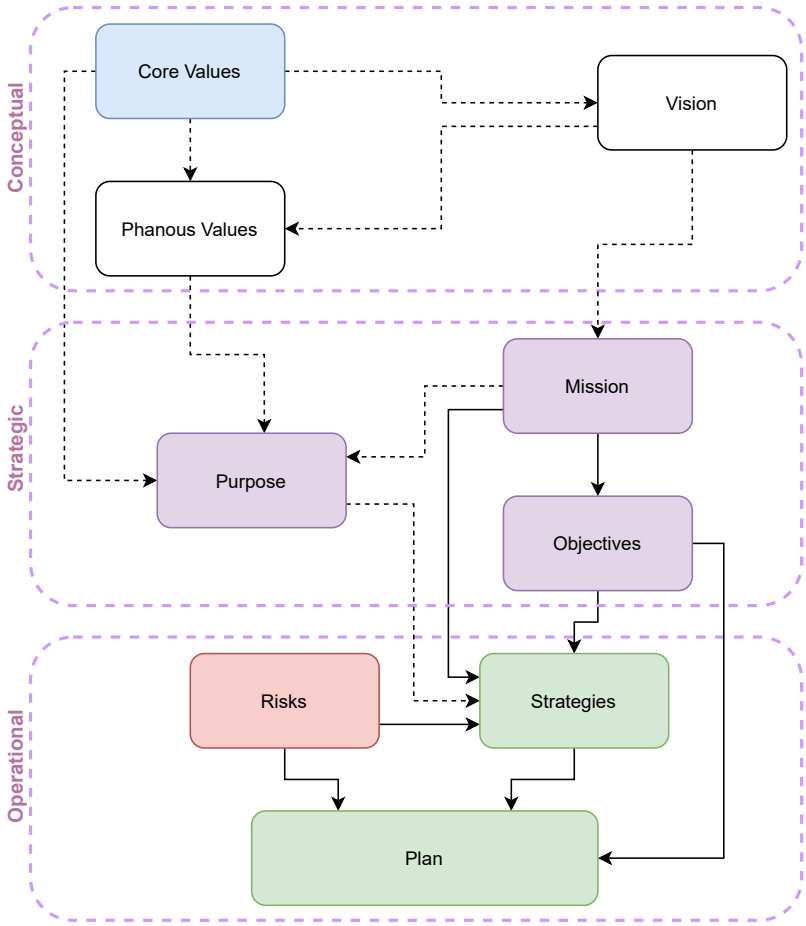

Figure 1: The road-map for the R&D strategy plan. Dashed lines represent conceptual, and solid lines represent functional causalities

This document is based on the design of Edward Tufte's books [1] and the use of the `tufte-book` and `tufte-handout` document classes.

[1] Edward R. Tufte. *The Visual Display of Quantitative Information*. Graphics Press, Cheshire, Connecticut, 2001. ISBN 0-9613921-4-2; Edward R. Tufte. *Envisioning Information*. Graphics Press, Cheshire, Connecticut, 1990. ISBN 0-9613921-1-8; Edward R. Tufte. *Visual Explanations*. Graphics Press, Cheshire, Connecticut, 1997. ISBN 0-9613921-2-6; and Edward R. Tufte. *Beautiful Evidence*. Graphics Press, LLC, first edition, May 2006. ISBN 0-9613921-7-7

Methodology

To WRITE the Phanous Research and Innovation Centre R&D strategy plan we follow a three stage process comprising a *Conceptual*, *Strategic*, and *Operational* tiers. This process is illustrated in Figure 1. In Figure 1 the lines represent the flow of information across the stages and action sets. Dashed lines represent conceptual, and solid lines represent functional causalities.

IN THE CONCEPTUAL layer the chief objective is to determine the *Phanous Research and Innovation Centre Vision Statement* and any supplementary principles we wish to amend to the company core values. Since Phanous Research and Innovation Centre is a subsidiary of Cafebazaar and is designed to generate value, the Vision Statement and Phanous Research and Innovation Centre Values should be inspired from, and consistent with the company Core Values.

IN THE STRATEGIC layer we consider the mission through which we can realize our longer term vision and then break this down into a set of objectives which when delivered in culmination, lead to the fulfillment of our mission in Phanous Research and Innovation Centre . We will also ask ourselves what do we consider to be primary purposes of this R&D strategy plan in the short term and longer term future of Phanous Research and Innovation Centre ?

IN THE OPERATIONAL layer we shall identify the major risks associated with the operations of Phanous Research and Innovation Centre . Then, by considering the outcomes of the strategic layer, we propose a set of specific action strategies which we believe will deliver our objectives, mitigate the risks, and fulfill our primary purposes for this plan.

Scope

The scope of this R&D strategy plan is broken down into 4 strategic fields: **architecture**, **processes**, **people**, and **portfolio** [2]. Together, decisions made in each of these categories constitute the R&D strategy.

[2] Gary P. Pisano. *Creating an R&D Strategy*. Harvard Business School, April 2012. Working Paper

Architecture refers to the set of decisions around how R&D is structured both organizationally and geographically. This category includes decisions such as centralization vs. decentralization of R&D; the size, location, and focus of R&D units; whether R&D units report to business units or are autonomous; whether research is organizationally separated from development; and the degree to which R&D utilizes external resources and partnerships.

Processes are the formal and informal ways that R&D is carried out. This category includes choices about project management systems, the governance of projects (including the nature of senior management reviews), the sequence and flow of critical project tasks, the timing of reviews, and the metrics and indicators used to track projects.

People are an enormously important aspects of an R&D system. Despite the growing use of sophisticated instrumentation, computer simulation, and laboratory automation, R&D is still a labor intensive process. Choices about human resources; such as the mix of generalists vs. specialists, technical backgrounds and training, work styles, career paths, lay off policies, etc. are significantly important.

Portfolio refers to the desired resource allocation across different types of R&D projects and the criteria used to sort, prioritize, and select projects. The R&D portfolio reflects the priorities of the R&D strategy.

1
About Us

Our Vision

A VALUE CREATION research community driven by innovation and collaboration to be a part of the effort to solve future life challenges.

Our Mission

WE ARE A TEAM of diverse and dynamic scientists with the mission to create intellectual and commercial value by principal research into future trends and solving major challenges in our product development systems. Our focus is on breakthrough research, development of disruptive technologies, and creation of novel processes. We strive to be the leading regional research centre of choice for distinguished research talent.

2
Our Values

Holding Core Values

CV1 We make decisions and develop products that are worthy of ourselves

CV2 We agree on trust as the basis of our conduct

CV3 We expect sincerity, respects and non-discriminatory conduct

CV4 We use our diversity to promotes our long term development

CV5 We make decisions with agility and boldness and learn from mistakes

Phanous Research and Innovation Centre Values

PV1 We do ethical research with integrity

PV2 We are pioneering and passionate in our contributions

PV3 We are principally innovative in our processes and deliverables

3
The purpose of this R&D strategy plan

A R&D strategy plan may serve a whole host of purposes. However within the time scope this document [1], we have identified the following usages as of special significance. In all items we follow a simple pattern of asking two important questions:

- What does this purpose refer to?
- Why is it important?
- How is the R&D strategy plan expected to help fulfill this purpose?

[1] Phanous Research and Innovation Centre is established in 2019 and the time scope of this R&D strategy plan is the five year period following an operational status of the centre. Within the scope of this document, *short term* refers to a period of two to three years, and long term refers to a period of around five years from establishment

P1. Alignment

What do we mean?

We must ensure that the general operation and development of Phanous Research and Innovation Centre remains aligned with the requirements and strategies of the Holding.

Why is this important?

Misalignment will lead to lost opportunity to create value or to cost.

How should the R&D strategy plan help fulfill this purpose?

- It should help identify soft-skills to be evaluated in the hiring process (for example; agility, growth mindset, big-picture visions)
- It should help people achieve an aligned mindset.
- It should be applicable in the design of processes used to manage the evolution of projects and labs

P2. Collaborations

What do we mean?

As a research institute, Phanous Research and Innovation Centre does not have most of the operational limitations and considerations of the parent company in terms of joint external collaborations. At the same time, since Phanous Research and Innovation Centre is an independent unit, it may act as a proxy to establish effective links with organizations we are currently having difficulty linking up with (for example other universities or research centres - national and international)

Why is this important?

Lack of collaborations will seriously jeopardize several primary objectives of setting up Phanous Research and Innovation Centre as outlined in Chapter 4.

How should the R&D strategy plan help fulfill this purpose?

- The R&D strategy plan should provide guidance on our policies and procedures governing the link up to other universities, research centres, NGOs etc..
- The R&D strategy plan should indicate what type of relationships with such bodies will best serves our objectives and interests.

P3. Resources

What do we mean?

This is related to all decision making processes related to the request for resources such as equipment, funding credit, people etc.

Why is this important?

Poorly planned (where poorness relates to timing, amount, nature etc.) resource requests will reduce sustainability of funding, create a confidence crisis and disrupt objectiveness by creating conflict of interest.

How should the R&D strategy plan help fulfill this purpose?

The R&D strategy plan should provide pointers on how:

- What metrics should be used for validation of resource requests?
- How are required resources prioritised for request?
- What to do when requested resources are not allocated.

P4. Branding

What do we mean?

Phanous Research and Innovation Centre will assume a corporate identify which will evolve overtime. This identify is considered as an asset for Hezardastan holding.

Why is this important?

A poor corporate brand will substantially slow down growth.

How should the R&D strategy plan help fulfill this purpose?

- The R&D strategy plan should determine the main features of our corporate identify.
- The R&D strategy plan should indicate how we should go public.
- The Phanous internal branding strategy in Hezardastan holding.

P5. Certification

What do we mean?

This refers to the certification from the Ministry of Science, Research and Technology to operate as a government approved research centre.

Why is this important?

No certification will impose some operational limitations such as not being to formally employ faculty members.

How should the R&D strategy plan help fulfill this purpose?

- The R&D strategy plan should illustrate under what conditions should we consider activating the certification process.
- To determine what form of institute does best serve our purpose.

P6. Development of core competency

What do we mean?

As a business we don't yet have the core competencies to handle large scale and extended research and innovation projects.

Why is this important?

As we move closer to the technology edge, this shortcoming will negatively affect our expansion.

How should the R&D strategy plan help fulfill this purpose?

The R&D strategy plan should indicate how:

- Each process leads to development of core competencies in the areas mentioned?
- Each project leads to development of core competencies in the areas mentioned?

P7. Coherency

What do we mean?

Hezardastan holding is agile, dynamic and with a high staff turn over. Each decision and its effect will likely spread over a large number of acting agents. Under such circumstances it is important that decisions taken over a time span, are objective, consistent and coherent.

Why is this important?

Low consistency will lead to loss of motivation and conflict.

How should the R&D strategy plan help fulfill this purpose?

- Is the Phanous Research and Innovation Centre R&D strategy plan written in such a way to facilitate and promote consistency of decisions overtime?
- Is the Phanous Research and Innovation Centre R&D strategy plan written to facilitate and promote coherency of decisions across the scopes?

P8. Culture

What do we mean?

We believe that one of the leading contributing factors to the success of Hezardastan holding has been its culture (as encapsulated by its core values). We want to get inspiration from, and build these values and culture to create a similarly positive environment.

Why is this important?

A culture mismatch will lead to misalignment, slow down knowledge transfer and make staff rotation difficult. In addition, a not-fit-for purpose culture will reduce motivation and affect creativity.

How should the R&D strategy plan help fulfill this purpose?

- It should holistically determine what are the main features of culture we want to establish at Phanous Research and Innovation Centre .
- It should serve as a reference to determine if our decisions, processes and procedures lead to a culture like the one we intend to have.

P9. Funding

What do we mean?

Short term funding is initially secured upfront. Long term funding or its sources (internal or external) are not at the moment secured.

Why is this important?

No funds will mean the end of operations.

How should the R&D strategy plan help fulfill this purpose?

- The R&D strategy plan should aid people to remain focus on the value creation cycle and demonstrate the real value of the work.
- The R&D strategy plan should be useful in determining key policies such as do we need financial independence? How can we get it if so?

P10. Gate keeping

What do we mean?

In our view gatekeeping is a fundamental tool in ensuring that the value creation cycle operates as intended and business impact is made.

Why is this important?

Gatekeeping needs to be repeatable, consistent and objective. Poor gatekeeping will disrupt the value creation cycle.

How should the R&D strategy plan help fulfill this purpose?

- The R&D strategy plan should be able to impose a measure of normalization in gatekeeping across all labs.
- The R&D strategy plan should help determine what gate conditions should be implemented.

P11. Recruitment

What do we mean?

Distinguished people we want to work as lead researchers or principal investigators will want to know operational details about Phanous Research and Innovation Centre before they make a commitment.

Why is this important?

Distinguished people will not risk their academic reputation/career by getting involved with half backed ideas.

How should the R&D strategy plan help fulfill this purpose?

- Does the R&D strategy plan cover all issues which are important for potential lead researchers or principal investigators to make their decision?
- Will the R&D strategy plan plan give an accurate representation of what we want to achieve so that people can decide if they are a good fit or not?

P12. HR branding

What do we mean?

In line with our vision and mission, we want to gather a pool of highly distinguished talent at Phanous Research and Innovation Centre . We must therefore create a strong HR brand such that these people will want to choose us to work with. HR Branding is more related to software (i.e. processes) rather that hardware (i.e. architecture).

Why is this important?

Poor HR branding will reduce our success chances and drive up costs.

How should the R&D strategy plan help fulfill this purpose?

- Are we creating the right environment for people to want to come to?
- Are we letting people know about us the right way?

P13. Motivation

What do we mean?

One of the primary reasons people loose motivation over time is that they loose sight of the meaning and significance of their work.

When these are documented future employees may refer to them, give comments and therefore develop a sense of ownership and engagement.

Why is this important?

Loss of motivation will directly impact depth and breadth of research work and hit employee engagement.

How should the R&D strategy plan help fulfill this purpose?

- Does the R&D strategy plan correctly document what we are about, what we want to achieve?
- Is our purpose something people want to be part of?

P14. Risk mitigation

What do we mean?

We face several internal and external operational risks which have the potential to significantly divert Phanous Research and Innovation Centre from its development plan. We should have risk mitigation plans.

Why is this important?

Since risks can cover almost all aspects of the operation of Phanous Research and Innovation Centre , poor risk mitigation planning will have widespread adverse effects.

How should the R&D strategy plan help fulfill this purpose?

- Are the major risks analysed in the R&D strategy plan?
- Does the R&D strategy plan contain sufficient contingency plans to mitigate the risks?

Analysis and classification of purposes

TABLE 3.1 lists all the outcomes we expect to achieve from our R&D strategy plan. The scope of issues covered in Table 3.1 is clearly wide. It is likely that an effort made towards fulfillment of all identified issues shall meet with failure due to the resulting lack of focus and functionality. Our priority for the moment is to concentrate on issues of significant implications. From Table 3.1, this will narrow down the scope of the R&D strategy plan to the following areas: P1, P3, P4, P7, P8, P9, P10, P13.

Issue	Time frame	Expected business Impact
P1. Alignment	Long term	Significant
P2. Collaborations	Long term	Ordinary
P3. Resources	Short term	Significant
P4. Branding	Short term	Significant
P5. Certification	Long term	Ordinary
P6. Development of core competency	Long term	Ordinary
P7. Coherency	Long term	Significant
P8. Culture	Short term	Significant
P9. Funding	Long term	Significant
P10. Gate keeping	Short term	Significant
P11. Recruitment	Short term	Ordinary
P12. HR branding	Short term	Ordinary
P13. Motivation	Short term	Significant
P14. Risk mitigation	Short term	Ordinary

Table 3.1: Policy making implications of the Phanous Research and Innovation Centre R&D strategy plan

BY TIME FRAME in Table 3.1 we are referring to our projected estimate of how far it takes the respective issue to mature into an observable impact on the operations and processes of Phanous Research and Innovation Centre . Short and long term have already been defined in Chapter 3.

BY EXPECTED BUSINESS IMPACT in Table 3.1 we are referring to our projected estimate of the size of the impact, within the expected time frame.

4
Phanous Research and Innovation Centre Objectives

The Hezardastan holding pursues multiple objectives with the creation of Phanous Research and Innovation Centre . Each of these objectives might cover one or more scopes as outlined in Section 9. In this section we will first list our primary objectives in creating a research centre and then provide an analysis of the scope of each objective. For each objective we discuss:

- A description of what the objective refers to
- Why is this objective important

O1. Distinguished Talent pool

What do we mean?

We believe that our most important asset are the people who work with us. When you bring together highly talented, creative and diverse people, and set up a culture of communications and collaborations, great things will happen. At Phanous Research and Innovation Centre we want to create a distinguished pool of highly gifted and able national and international talents. We feel that we have the resources necessary to attract people from internationally acclaimed institutions.

Why is it important?

It is our Vision, our Mission and also precisely the principal way through which the core business has prospered.

O2. Talent retention

What do we mean?

The Hezardastan holding is loosing some of its employees because they feel they no longer face interesting and deep challenges in their job or feel that they want to work on more fundamental problems away from the business environment of OKRs, KPIs, deadlines, meetings etc... Also some of the employees plan to have a

future academic career and don't want to stay too far and too long away from academic/research environments. An affiliated research centre is an ideal environment to guide some of these people towards, and thereby keep them in the company.

Why is it important?

These people are usually senior employees who have worked at Hezardastan holding for several years. They represent a large capital and time investment in training and mentorship. Moreover they have amassed a huge amount of operational knowledge and experience which will be lost if they leave.

O3. Complement company innovation processes

What do we mean?

We don't just want to be innovative; we want to position ourselves truly at the feasible edge of tech innovation. Hezardastan holding has been successfully meetings its short to medium term innovation requirements and we don't feel we should create a parallel innovation process for the more short term requirements.

Why is it important?

Because we must demonstrate that what happens at Phanous Research and Innovation Centre is not possible inside the holding. Moreover the value creation cycle relies on a view for long term cutting edge innovations rather than shorter term development milestones as more frequently found in Hezardastan product development pipelines.

O4. IP portfolio

What do we mean?

To add intellectual property to the product portfolio of the holding.

Why is it important?

Most successful tech companies make money from their IP not their products. IP produces a more secure long term investment because it has a larger shelf life and wider scope.

O5. Business impact

What do we mean?

Phanous Research and Innovation Centre should be able to make a material business impact. This calls for something beyond simple

value creation and requires value to be created in such a way that it can be streamlined back into the product development pipelines.

Why is it important?

If we fail to make business impact, we lose the economic justification for future funding.

O6. Futurist research

What do we mean?

Our view is towards future technology trends as opposed to more recently emerging trends. When such future trends materialize into viable and commercial technologies, we want to be in a position to be able to quickly take advantage of the commercial benefits. This does not mean we aim to be a global leader in the technology aspects of these fields, but it requires us to not be far behind. We wish to position ourselves in a ready-to-roll state in such technologies.

Why is it important?

Some of the concepts that are considered as future technology trends are so fundamentally different to our current technology stack that unless we prepare in advance, we would certainly loose our business advantage and market share.

O7. Support product development systems

What do we mean?

Phanous Research and Innovation Centre should be able to provide a supporting role to solve our major project challenges. We are referring more to those which we expect to emerge in the long term. This is another form of value creation which we expect from Phanous Research and Innovation Centre .

Why is it important?

The expansion of our product portfolio, expansion of our user base, the growth of our databases, and future expected integration of our databases is expected to lead to such large scale problems that require genuine research to solve them effectively and efficiently. If we don't develop such a ability, we shall always remain limited in scope and reach market wise and the kinds of services we can offer.

O8. Research collaboration

What do we mean?

Legal complications, privacy of data and a protective mentality, has created a situation in which as a business, the holding has little or no external collaborative partners. At Phanous Research and Innovation Centre we have some operational advantages which can be utilized to shift this trend and set up multiple effective collaborations. First, we have the opportunity to construct our legal and organisational paradigms to not only permit, but also to facilitate collaborations. Secondly since for the operation of Phanous Research and Innovation Centre we have to put in place systematic procedures and processes to anonymize data, this will in term facilitate proxy links. Finally, most renowned academic institutions and persons are more welcoming to collaborations with a dedicated research centre who shares their concerns and is focused on their relationship, as opposed to a large corporate company for which such links/collaboration represent a tiny portion of its activities (and generally not the main).

Why is it important?

Working in isolation will limit the scope of projects we can work on, it will limit value of our research, and will negatively impact our brand. It is also important for the learning and development of both the organization and its people.

O9. Agile R&D management

What do we mean?

The agile framework is well known. It primarily refers to decision making processes. Agile is more concerned with adaptability than speed. At Hezardastan holding we implement most of the agile best practices and similarly we wish to adopt such practices at Phanous Research and Innovation Centre .

Why is it important?

As the R&D arm of Hezardastan holding, Phanous Research and Innovation Centre will develop a multi-faceted relationship with the core business side over time. If one side of this relationship is agile and another is not, this will create a huge interface burden and more likely reflect badly on all link-up levels (from staff to projects to products). It may ultimately lead to such two diverse cultures developing between the two, that no real effective value creation can take place

O10. leading research centre of region

What do we mean?

To be the leading regional research centre within the scope of our activities.

Why is it important?

It is our mission

O11. Knowledge transfer

What do we mean?

We want to have effective knowledge sharing across Phanous Research and Innovation Centre and the core business side and vice-versa. We expect that as a research centre, Phanous Research and Innovation Centre will play a significant role in developing primary core competencies related to research, innovation and creativity across the holding.

Why is it important?

Ineffective knowledge sharing will severely affect the value creation cycle, limit development of core competencies, and make staff rotation almost impossible.

Analysis of the scope of the objectives

In order to meet our objectives we must develop a set of tools and strategies. These are categorised within the scopes defined in Section 9. Table 4.1 illustrates the scopes related to each objective, and consequently where we plan to develop our most effective tools in relation to the stated objective.

Objective	People	Architecture	Process	Portfolio
O1	■			
O2	■		■	
O3		■	■	■
O4			■	■
O5	■	■	■	
O6		■		■
O7		■	■	■
O8	■		■	
O9		■	■	
O10	■			■
O11		■	■	

Table 4.1: The objectives and outcomes of Phanous Research and Innovation Centre

5
Risks

A full risk assessment using the Project Risk Failure mode and Effect Analysis (RFMEA) has been previously carried out for Phanous Research and Innovation Centre and the results are documented in [1].

The results of the RFMEA[2] was that of the identified risks associated with the management of Phanous Research and Innovation Centre , there are four which take priority and must be effectively mitigated. For each of these risks we discuss:

- A description of what the risk refers to.
- Why is this risk a planning priority?

[1] Amin Nobakhti. Project asimov: Objectives and costs. `Objectives and Costs`, March 2019

[2] Scott A. Mastroianni. Risk management among research and development projects. Theses and dissertations, Lehigh University, 2011

R1. Protection of intellectual property

What is this risk about?

We would not be able to fully protect our intellectual property. The risk arises because the national and international patent systems are not linked and do not recognize each other. Iran is not a signatory of the international copyright laws and vice versa.

Why is this risk a planning priority?

In the RFMEA analysis, this risk achieved a Risk Probability of 7 [3], a Risk Impact of 7 [4], a Risk Score of 49 [5], and a high Risk Priority Number of 441 [6]

[3] Risk Probability (RP) is the probability of probability of failure occurrence. It is estimated on a 5 tier system: 1 (Very Low), 3 (Low), 5 (Moderate), 7 (High), and 9 (Very High)

[4] Risk Impact (RI) is the impact or severity of the failure . It is estimated on a 5 tier system: 1 (Negligible), 3 (Minor), 5 (Moderate), 7 (Serious), and 9 (Critical)

[5] Risk Score (RS) is RP multiplied by RI

[6] RPN is the product of RS and the Risk Detection Score (RD). RD is measured from 1 to 10 and indicated how easy it is not detect the risk in sufficient time to plan for contingencies.

R2. Dissemination of commercial data

What is this risk about?

The highly collaborative and dynamic environment we wish to create at Phanous Research and Innovation Centre carries with it the risk that critical holding commercial data will leak outside. Leaked data will put at risk our commercial interests and might lead to litigation's.

Why is this risk a planning priority?

In the RFMEA analysis, this risk achieved a Risk Probability of 9, a Risk Impact of 7, a Risk Score of 63, and a high Risk Priority Number of 451.

R3. Misaligned research projects

What is this risk about?

This is the risk that over time, Phanous maligns with the holding. Misalignment might manifest in several ways including the projects, people and processes. It will ultimately lead to seizure of the value creation cycle and stops business impact.

Why is this risk a planning priority?

In the RFMEA analysis, this risk achieved a Risk Probability of 7, a Risk Impact of 9, a Risk Score of 63, and a very high Risk Priority Number of 441.

R4. Reverse osmosis of talent

What is this risk about?

The Hezardastan holding has had open policy towards staff rotation and employees are free to make lateral career path changes. At the same time, Phanous Research and Innovation Centre will represent an attractive opportunity for senior employees who are looking for new challenges, to do research, or to build their resume and publish papers. It is likely that many of these people are currently playing critical roles in the holding and an uncontrolled reverse osmosis of people from the holding to Phanous will lead to severe disruptions. Ideally, we want to achieve the opposite of this, in which raw talent is hunted by Phanous Research and Innovation Centre , trained and then some of them guided towards the product pipelines at the business side.

Why is this risk a planning priority?

In the RFMEA analysis, this risk achieved a Risk Probability of 5, a Risk Impact of 7, a Risk Score of 35, and a high Risk Priority Number of 215 [7].

[7] subsequent meetings indicates that we might have underestimated this risk in the RFMEA analysis. In addition some of the senior people at the core business side believe that the RP and RI are actually higher than what we have provisioned for

6
Strategies

As illustrated in Figure 1, at the operational layer, we are in a position to devise a set of clear strategies in reference to our Mission, Objectives and Purposes. Strategies are in effect the tools and processes we shall use to meet our objectives and mitigate the risks.

For each strategy, we shall discuss two important aspects. These are:

- A description of what the Strategy refers to.
- What is the main feature of this strategy?

S1. Gatekeeping committee

What is this strategy about?

The gatekeeping committee represents the main interface bridge between Phanous Research and Innovation Centre and the holding. The committee consists of:

- Principal Investigators
- Lead Researchers (related)
- Vice Presidents (related)

The committee's chief scope of responsibilities include:

- Approve Shortlist of Innovation Labs Proposals
- Digestion of Innovation Labs
- Termination of Innovation Labs
- Funding

What is the main feature of this strategy?

Main research management decisions will be taken jointly with the product side.

S2. Compact sized innovation labs

What is this strategy about?

Research activities are organized around labs instead of projects. The units are refereed to as Innovation Labs and formed on the basis of approved ideas or concepts. Innovations labs are teams of researchers who form around a lead researcher and work on a specific problem. They disband once the labs matures through its gates (and form new labs if they want to). Therefore there are not any permanent labs at Phanous Research and Innovation Centre .

What is the main feature of this strategy?

- Labs exist as long as they are on the value creation cycle
- Teams remain focused on the lab objective
- Staff rotation is facilitated

S3. Multistage, gated, and time bounded Labs

What is this strategy about?

We consider labs as entities which come to life based upon an idea and mature towards an outcome with business impact. In the process, labs will progress through several gates. The gates are:

- Conception
- Basic Research
- Applied Research
- Development
- Digestion

Gate progression is event-driven, but time bounded. This means labs can cross a gate at any time, upon satisfaction of the gate criteria, but will be terminated if gate crossing does not occur within a maximally permitted time frame.

What is the main feature of this strategy?

Labs are pipelined into a value creation cycle.

S4. Third committee

What is this strategy about?

There is more than one Principal Investigator and together they form the Third committee. The Third committee represents the

chief decision making unit within Phanous Research and Innovation Centre .

The team's main responsibilities include:

- Approval and Initialization of Innovation Labs
- Trigger Innovation Lab Terminations
- Learning and Development
- Phanous Research and Innovation Centre Branding
- R&D strategy and Development
- Secure Funding

What is the main feature of this strategy?

Important decisions, especially at the early formation stages of the centre are taken in unison of an experienced team.

S5. The gatekeeper

What is this strategy about?

The Gatekeeper is a virtual role. This means the respirability is assumed by a different person at each gate. The function of the Gatekeeper is:

- To trigger the gate crossing process
- To facilitate the gate crossing by preparing the team for the crossing, including relevant documentation, data collection, and proposal write-ups
- To verify the gate triggers are activated

What is the main feature of this strategy?

The gatekeeper will control conflict of interests and expedite gate progression. It is also a good checkpoint for cross-lab performance calibration.

S6. Late stage digestion management

What is this strategy about?

The final stage of an innovation lab's life is referred to as ***digestion***. Digestion refers to the stage in which the research outcomes are utilized at the business side to make business impact. The importance of this closed-cycle system has lead to consideration of this stage as a separate phase with special significance.

What is the main feature of this strategy?

Business impact is not assumed to be a de-facto byproduct of research. It is considered something that needs to be planned for.

S7. Distinguished lead researchers

What is this strategy about?

We want to work with distinguished lead researchers. We form interactive management relationships with our leads and implement a collaborative decision making processes. Our lead researcher have the opportunity to have direct impact on almost all aspects of their labs.

What is the main feature of this strategy?

As per description.

S8. Competitive pay package

What is this Strategy about?

Staff pay figures are controlled to be comparable to (but just below) equivalent experience levels in the company, but very favourably higher than similar roles in other academic institutions.

What is the main feature of this strategy?

controls movement of senior people from the business side to Phanous Research and Innovation Centre .

S9. Performance evaluation

What is this Strategy about?

Phanous is a competitive and highly talented research and development centre. Performance evaluation at Phanous is not considered as a temporary event, but a rather a continuous cyclical process of assessment, evaluation, and action planning. Since Phanous labs are compact in size, the labs will not be able to make their potential impact unless all members perform at their best. For this reason, we take great care to ensure that our assessments are accurate, our evaluations are fair, and our action plans target learning and development of our researchers. Where necessary, they will also have sufficient prohibitory capacity.

What is the main feature of this strategy?

- We have an all-inclusive approach to assessment and our models will consider data obtained from self-assessment, peer-

assessment, and leader-assessment.

- Our attitude to PE is a learning and development one which allow employees to expand their abilities and remedy problem areas. Accordingly it is not considered as a temporary event, but a rather a continuous cyclical process of assessment, evaluation, and action planning
- Our competency models will cover both hard skills and soft skills in terms of ability and performance. This gives a good indication of current, and expected future performance states.
- We develop customized ladders for each major carrier path.

The decision making scope of each Strategy

Since strategies are engineered to meet objectives, they are therefore also compatible with the scope categories defined in Section 9. As shown in Table 6.1, strategies are designed so that each focus area is adequately considered for.

Strategy	People	Architecture	Process	Portfolio
S1		■	■	
S2		■		■
S3			■	
S4		■	■	
S5			■	
S6			■	■
S7	■		■	
S8	■		■	
S??			■	
S9	■		■	

Table 6.1: Illustrating how each action strategy is related to the scopes of the Phanous Research and Innovation Centre R&D strategy plan

7
Action Plan

In Chapter 4 our objectives in creation of Phanous Research and Innovation Centre have been listed, and in Chapter 5 we reviewed the most prominent risks we consider might occur during the process. A minimum viability plan must include at least one strategy for each objective to be achieved and also one strategy for the mitigation of each risk.

Clearly multiple strategies per objective/risk will provide more leverage is reaching our goals or mitigating our risks. At the same time, if single strategies are assigned to very many objectives or risks, they loose focus of purpose and effectiveness in application. We aim to keep the assignments at a reasonable number such that we may both have the benefits of leveraging redundant strategies against single risks/objectives, whilst at the same time keeping the scope of each strategy fairly narrow to enhance it effectiveness.

ID	Issue	Strategy
	Risks	
R1	Protection of intellectual property	-
R2	Dissemination of commercial data	-
R3	Misaligned research projects	S1, S4, S**??**, S6
R4	Reverse osmosis of talent	S8, S7, S9
	Objectives	
O1	Distinguished Talent pool	S7, S8, S3
O2	Talent retention	S7, S8
O3	Complement company innovation processes	S1, S7, S8
O4	IP portfolio	S7, S5, S8
O5	Business impact	S6, S1, S3, S5
O6	Futurist research	S1, S7
O7	Support product development systems	S4, S5
O8	Research collaboration	S4, S9
O9	Agile R&D management	S2, S4
O10	leading research centre of region	S7, S8, S9
O11	Knowledge transfer	S5, S4, S9

Table 7.1: Action-plan, scope fulfillment verification

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