

VERSION 2.1

PRINCIPIA RESEARCH

PHANOUS RESEARCH AND INNOVATION CENTRE



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*Prepared with the deepest love for our
country, Iran*

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1

About Principia Research

THIS IS a collection of Phanous guidelines on Research conduct. It will cover essential Research matters from the point of view of:

- Individual members of Phanous
- Phanous research and innovation labs
- Phanous research and innovation centre
- Holding subsidiaries
- External individuals
- External institutions

THIS BOOK is designed to complement two other important documents: The Katibeh ¹, and the Employee Handbook ².

¹ Phanous. *The Katibeh*. Phanous Research and Innovation Centre, Tehran, Iran, 2019

² Phanous. *The Employee Handbook*. Phanous Research and Innovation Centre, Tehran, Iran, 2020

This document is based on the design of Edward Tufte's books ³ and the use of the tufte-book and tufte-handout document classes.

³ 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

2

Gatekeeping

2.1 What is gatekeeping?

RESEARCH activities are organized around labs instead of projects. The units are referred to as Innovation Labs and formed on the basis of approved ideas or concepts.

INNOVATION labs are teams of researchers who team around a lead researcher and work on a specific problem. Innovation labs are entities which come to life based on an idea and mature towards an outcome with business impact. In the process, labs will progress through several stages or so called 'gates'. These gates are,

1. Conception
2. Basic Research
3. Applied Research
4. Development
5. 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. Some of the main features of the gatekeeping model are that the innovation labs are pipelined into a value creation cycle, and the teams remain focused on the lab objective.

VALUE CREATION is a key philosophy behind gatekeeping ¹. In fact we can consider gatekeeping as the process by which we ensure R & D leads to value creation. This process encompasses 5 gates, two of which are critically important. Gate 1 (Conception) and gate 5 (Digestion). This importance derives from their function as the interfacing gates between the product side and Phanous.

¹ Phanous. *The Katibeh*. Phanous Research and Innovation Centre, Tehran, Iran, 2019

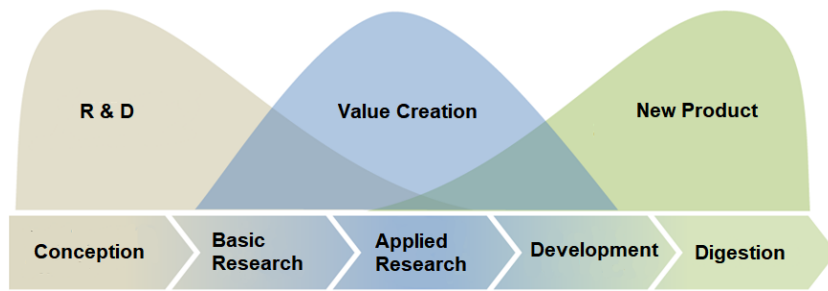


Figure 2.1: Gatekeeping and Value creation

CORRECT implementation of gatekeeping will lead to the business impact cycle (See Figure 2.2). This is a cycle because challenges with existing products lead to new products and new products will lead to newer challenges. This cycle operates effectively if gatekeeping is effectively maintained.

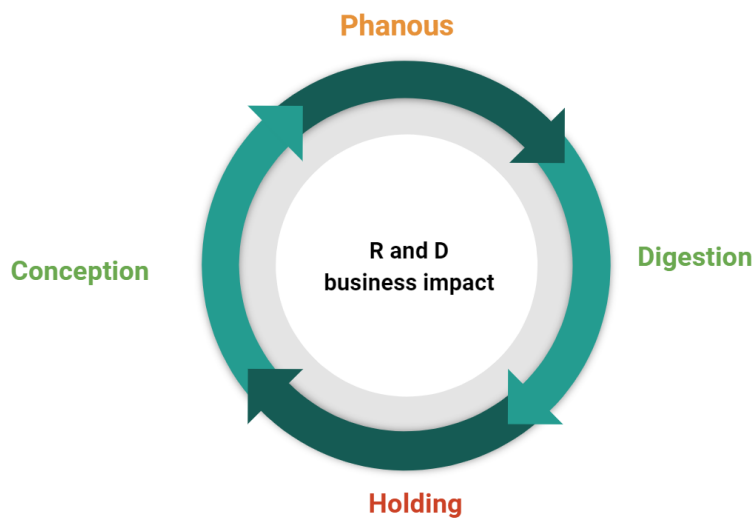


Figure 2.2: Business Impact Cycle

2.2 Gatekeeping instruments

EFFECTIVE operation of the gatekeeping process relies on utilization of several instruments. These are teams or individuals with specific functions and are part of the larger Phanous organizational chart (see the Employee Handbook ²).

² Phanous. *The Employee Handbook*. Phanous Research and Innovation Centre, Tehran, Iran, 2020

BEFORE having a deeper look at each of the gates, lets have a look at some of the key gatekeeping instruments. This will help us get a better understating of the process.

The taskforce

As a prerequisite of creation of a lab, for a potential idea of a lab, a Task Force is created jointly between Phanous and the respective product team(s). The Task Force comprises of the following people,

- One or more PIs from Phanous.
- A Point of Contact Person (PCP) from the product team
- If required, independent third party advisors

THE PCP is a person who is assigned by the product team leader (and may be the team leader themselves). The PCP is a facilitator to ensure smooth and effective communication and knowledge sharing between Phanous and the product team. The PCP is a person who has a basic appreciation and understanding of scientific research work, and is also aware of product challenges, development strategies and business plans. They will be uptodate with the latest cutting edge technological developments in the product scope. The PCP will collaborate with us to,

- Identify major product challenges which require fundamental research
- Narrow down the research scope.
- Define communication protocol with the product team
- Find and evaluate proper lead researcher/researcher.
- Perform basic risk and business impact assessment

The gatekeeping committee

THE GATEKEEPING committee represents the main interface bridge between Phanous Research and Innovation Centre and the respective product side. The committee members differ for different gates and different labs.

THE COMMITTEE'S chief scope of responsibilities include,

- Approval of passing a gate
- Funding

The third committee

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.

THE COMMITTEE'S main responsibilities related to gatekeeping include:

- Start Taskforce and Initiate Innovation Labs
- Trigger Innovation Lab Terminations
- R&D strategy and Development
- Secure Funding

THE THIRD COMMITTEE will ensure that important decisions, especially at the early formation stages of the centre are taken in unison of an experienced team.

The gatekeeper

THE GATEKEEPER is a virtual role (i.e. shared across several real persons). The function of the Gatekeeper is,

- To trigger the gate crossing process.
- To facilitate the gate crossing by preparing the lab for the crossing, including relevant documentation, data collection, and research plan write-ups.
- To verify the gate triggers are checked.

THE GATEKEEPER will control conflicts of interest and expedite gate progression. In gates at which the gatekeeper is also the lead researcher, this is especially important. It requires that the gatekeeper plans in advance, with appropriate strategies such that the conflict of interest between the two roles is minimized. It is also a good checkpoint for cross-lab performance calibration.

2.3 Gates overview

LET US have a deeper look at the five gates involved in the gatekeeping process.

Gate 1: Conception

Gate	Conception
Purpose	To approve creation of a new Innovation Lab
Key Questions	<ul style="list-style-type: none"> • What is the problem we want to solve? • Who wants the solution and why? • Why should we work on it?
Typical Outcomes	Research Plan, Lab Team
Typical Values	<ul style="list-style-type: none"> • A plan gives us a road-map for the completion of the project to business impact. • It is a binding document agreed upon by all the Stakeholders. It fosters commitment and resolve. • The research plan will provide all subsequent gate-crossing conditions and risk mitigation policies.
Roles	<ul style="list-style-type: none"> • Third Committee • The Taskforce • Lead Researcher
Gate Trigger	Completion of research plan
Gate keeper	PI
Gatekeeping Committee	<ul style="list-style-type: none"> • PIs • Lead Researcher • Stakeholder CEOs • Stakeholder VPs (Engineering and Product)

Table 2.1: Overview of the Conception gate

Gate 2: Basic Research

Gate	Basic Research
Purpose	Fundamental, theoretical research
Key Questions	<ul style="list-style-type: none"> • Do we have a novel solution? • Why do we think our solution will work?
Typical Outcomes	Scientific publications, IP
Typical Values	<ul style="list-style-type: none"> • Expose our solution to expert scrutiny • Protect our future interests • Allow us to get collaborative in the next gates
Roles	<ul style="list-style-type: none"> • Lead Researcher • Researcher • Research Assistant • Visiting Researcher • Intern
Gate Trigger	Demonstration of application potential
Gate keeper	Lead Researcher
Gatekeeping Committee	<ul style="list-style-type: none"> • PIs • Lead Researcher • Funding CEO

Table 2.2: Gate 2 overview: Basic Research

Gate 3: Applied Research

Gate	Applied Research
Purpose	Development of algorithms and methodologies / Conceptual product design
Key questions	<ul style="list-style-type: none"> • Is our solution conducive to commercialization? • What is the best implementation approach?
Typical Outcomes	Scientific publications, IP, Product proposal
Typical Values	<ul style="list-style-type: none"> • Secure resources / funding • Receive client feedback
Roles	<ul style="list-style-type: none"> • Lead Researcher • Researcher • Research Assistant • Engineer / Analyst • Visiting Researcher • Intern
Gate Trigger Gate keeper	Demonstration of product potential Lead Researcher
Gatekeeping Committee	<ul style="list-style-type: none"> • PIs • Lead Researcher • Funding VP of Engineering • Funding VP of Product

Table 2.3: Gate 3 overview: Applied Research

Gate 4: Development

Gate	Development
Purpose	Prototyping / Engineering
Key questions	<ul style="list-style-type: none"> • How to turn our solution into a functioning MVP? • How to integrate the product into existing products/systems?
Typical Outcomes	Product Prototype
Typical Values	<ul style="list-style-type: none"> • An MVP with full functionality and needs assessment • Roadmap for product integration
Roles	<ul style="list-style-type: none"> • Lead Researcher • Project Manager • Researcher • Engineer / Analyst • Intern
Gate Trigger	Successful demonstration of function
Gate keeper	Project Manager
Gatekeeping Committee	<ul style="list-style-type: none"> • PIs • Project Manager • Stakeholder CEOs • Stakeholder VPs (Engineering and Product)

Table 2.4: Gate 4 overview: Development

Gate 5: Digestion

Gate	Digestion
Purpose	Business Impact
Key questions	<ul style="list-style-type: none"> • What expertise do we need to transfer to the product team? • What knowledge do we need to transfer to the product team? • How will we address post production issues related to our research?
Typical Outcomes	Integration and production
Roles	<ul style="list-style-type: none"> • Lead Researcher • Project Manager • Engineer / Analyst
Gate Trigger	Product team adoption
Gate keeper	Project Manager
Gatekeeping Committee	<ul style="list-style-type: none"> • PIs • Lead Researcher • Project Manager • Funding CEO • Stakeholder Product Manager

Table 2.5: Gate 5 overview: Digestion

WHEN CONSIDERING individual gates, there are three key issues to consider. These are:

How do we open the gate? This is important because closure of a preceding gate does not necessary mean entrance to the new gate (also note that conception does not proceed another gate).

How do we generate the gate outcomes? Some general guides on good practices to generating the gate outcomes.

How do we exit the gate? What is the process to activate gatekeeping for each gate.

2.4 Gate 1 - Conception- details

How do we open the gate?

STARTING the conception gate means starting a new lab. So how do we start a new lab? This might seem confusing at first. It is in conception that we seek to define the problem and propose the plan, yet we obviously cannot randomly start conceiving ideas only for them to be vetted at the end of the gate. It is obvious that we must do some homework before Conception. We have a Task Force for this (more on this later on).

TO BEGIN CONCEPTUALIZATION (i.e. open the conception gate), we must have two important elements. The right problem and the right lead researcher. This means that opening the Conception gate requires we know the problem we want to work on, and the person who will lead our effort.

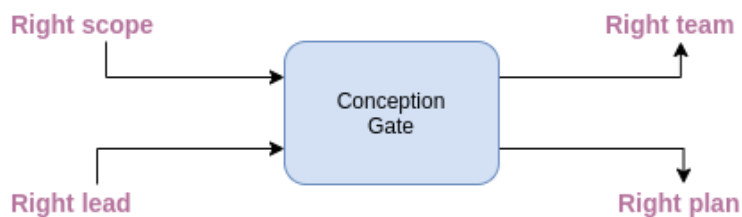


Figure 2.3: Basic function of the conception gate

THE RIGHT PROBLEM has three key features,

Create business value: Creating value does not necessarily mean that it might refer to an immediate product challenge. It could be an emerging business opportunity. But it does mean that there must be a clear opportunity for application in our business now, or in the future. Therefore we will not be doing research for the sake of research.

Require fundamental research: Innovation is an integral part of most developments at Hezardastan holding. The purpose of Phanous is neither to replicate, nor to phase out innovation already occurring at the product teams. We complete these processed by focusing on innovation which requires fundamental research. These types of innovations are longer term, and require a degree of focus, theoretical knowledge, and team research effort which is not found in the product teams

We have access to top talent: We will only consider starting a new lab, if we are sure we can get together an inspiring team of distinguished talent together. Foremost is the availability of a distinguished lead researcher with a known track record in the field.

THE GATE OPENNING requirements are achieved in consultation with the product team. When a potential topic for research is identified, a Task Force is created jointly between Phanous and the respective product team(s).

THE TASKFORCE will work to generate the conception gate opening requirements. This means they will define the general scope of the problem and its main features (but leave the details to be defined in consultation with the lead researcher and in the Conception gate), and they will identify a short list of potential lead researchers to lead the lab research effort.

How do we generate the gate outcomes?

CONCEPTION should generate two main outcomes; a good and feasible research plan, and the lab team.

THE LAB MEMBERS are recruited in consultation with the PIs, the Phanous HR Manager and the lead researcher. Full details of the hiring process is found in the Phanous Employee Handbook.

THE RESEARCH PLAN is a key document which outlines how the lab will progress through the 5 gates and mature to a successful completion. The research plan is different to a grant proposal because the overall scope of the problem has already been defined and its usefulness established.

THE RESEARCH PLAN serves to provide information pertaining to three important topics. These are,

1. Context
2. Research
3. Gatekeeping

IT IS EXPECTED that the above topics are **specified separately for each gate** as they may differ in nature from gate to gate. A template for a lab research plan is available to download from the Phanous wiki (Gerd).

Context

CONTEXT refers to the package of information which describes the pretext, scope and boundaries of the problem. The context of the proposal should contain the following,

Task Force Report: The summary of findings and recommendations of the Task Force about the candidate lab.

Background: What are the related previous and existing work that is being carried out in this area? What will be - in comparison- our projected standing in this field if we undertake this research.

Scope: The scope of the problem to be worked on. In general this will end up being within the wider scope defined by the task force, but may -on reasonable grounds- protrude beyond that. Any such protrudes will obviously need to be vetted by the original task force team members.

Description: A detailed description of the problem, within the context established by the task force report, background, and scope.

Impact: An overview of the main results and outcomes to be created and their value today, and at the expected maturity date.

Research

RESEARCH refers to the package of information which describe what is being sought? who wants it? and what is needed to achieve it.

A MAJOR difference between a typical grant proposal written to receive support from a funding body, and lab research plans written to approve creation of a lab at Phanous, is that the latter is not really vetted for technical trueness or prowess. This checkpoint is implicitly considered earlier at the time of hiring the lead researcher. Thus, technical merits and scientific correctness of the proposed methodology are considered defacto features of the proposal prepared by our lead researchers.

INSTEAD, research plans for labs -and this includes the research section- are prepared with an emphasis on needs, stakeholders, objectives and risks. Key elements which we consider fundamental to smooth completion of the R & D effort. In more details, these elements are listed below.

Objectives: Quite simply, what do we want to achieve, and why?

Resources: What resources (time, funds, manpower, equipment, etc. are required to successfully mature the lab to the final gate?

Stakeholders: Who are the stakeholders in this lab and what are the plans to reach consensus and alignment? This is important because one or more of the stakeholders might have conflicting interests. For example there might be business pressure to push an idea into deployment, but a technical preference to continue R & D.

Risks: What operation and execution risks (internally or externally) might we expect to face at each gate and what are the mitigation plans?

Outcomes: What are the planned results and outcomes? What is their specification? Outcomes are considered as objective deliverables such as IP, publications, prototypes, etc.

Values: How will the produced outcomes lead to value creation, and what are those values? For example, the value of an IP might be considered monetary (if to be resold) or market share (if deployed in a product). This clearly means we draw a distinction between research outcomes and research values. Values are the observable positive business impacts which the research results induce.

Methods: If there is anything novel or crucial, that's worth pointing out, from the methods can be mentioned here. By methods we mean what shall be used to execute the agenda and deliver the outcomes, it means all academic and administrative aspects such as research, risk management, collaborations etc.

Timing: What is timing plan of execution? how is the work broken down and what is the relational state of each work package?

Gatekeeping

GATEKEEPING refers to the package of information which describe how the gatekeeping process will be moderated at each gate. This is a key element of the research plan. In particular, the following content needs to be provided,

Metrics: What are the gatekeeping metrics for each gate? what outcomes, values,... should be achieved for the gate to be closed successfully? The gatekeeping metrics are closely related to the gate triggers outlined in Section 2.3.

Verification: What is procedure to evaluate - and verify- the gate crossing metrics? Are there third party reviews involves? will there be experimentation?

Fallback: in case of failure of each metric, what is the action plan.

How do we exit the gate?

EACH gate has associated crossing conditions as outlined in the previous sections. The procedure for the actual gatekeeping is shown in Figure 2.4.

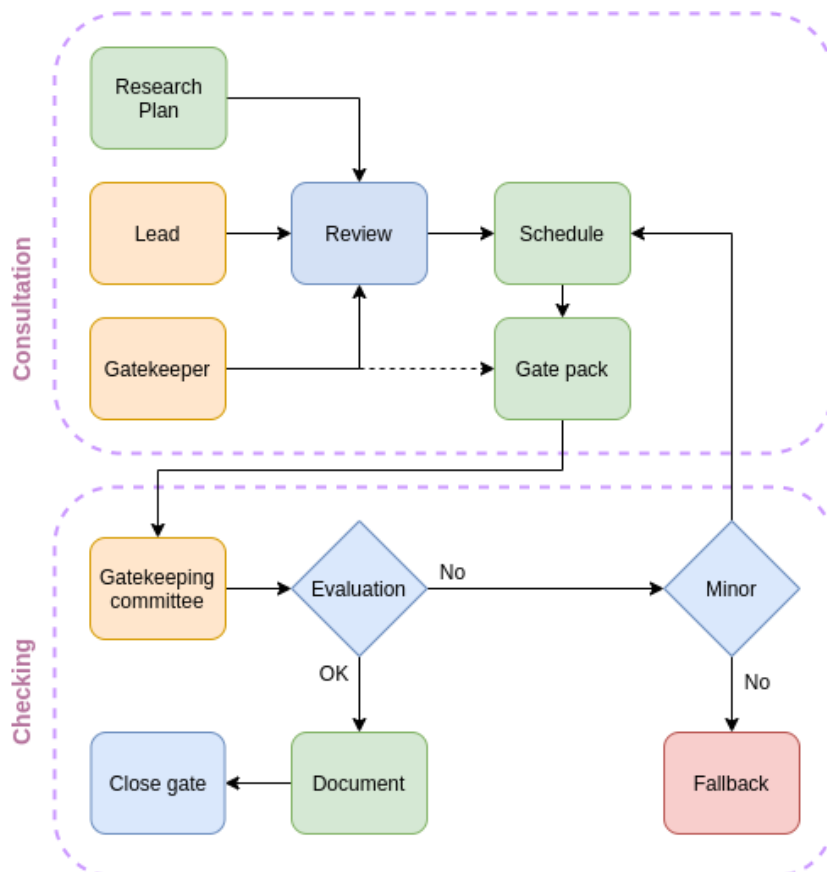


Figure 2.4: Gatekeeping procedure for each gate

THE PROCESS comprises of two stages; consultation and checking. Consultation is initiated by the gatekeeper. The lead researcher provides full documentation on the validation of the gate metrics according to the research plan. The pair will informally review the associated gate outcomes and documents. These details are then provided to the third committee. The third committee will verify that the gate metrics are full-filled based on evidence of the documents and subsequently draw up a gatekeeping schedule for the main events which need to be organized. The gate metric validation documents, together with the gatekeeping schedule comprise the gate pack.

THE GATE PACK is provided to the gatekeeping committee. The gatekeeping committee will review the research plan, and as the major stakeholder, formally commit to full execution of the research plan.

IF THE EVALUATION is positive, then the results of the gatekeeping are documented and the gate is closed (exited). The gate is not closed until proper documentation and archiving is performed. If the gate crossing is not successful, but the issues are deemed minor and correctable, an opportunity may be given to the gatekeeper to revise the gate pack and apply for checking again. If neither of these cases occur, the fallback plan (as outlined in the gatekeeping section of the lab research plan) comes into effect.

3

Collaborations

COLLABORATIONS is one of the cornerstones of Phanous. In fact it is so important that it is part of our vision statement (see the Katibeh ¹).

3.1 Objectives

PHANOUS welcomes and encourages internal and external collaborations. Internal collaborations are with other holding units and external collaborations are with alien institutions. In both cases, we pursue a set of specific objectives from our collaborations. These objectives are derived from the Phanous Research and Development strategy plan ². The core objectives are listed below and briefly discussed in the proceeding sections.

- O1. Research scope
- O2. Value of research
- O3. Learning and development
- O4. Branding

¹ Phanous. *The Katibeh*. Phanous Research and Innovation Centre, Tehran, Iran, 2019

² Phanous. *The Katibeh*. Phanous Research and Innovation Centre, Tehran, Iran, 2019

O1. Research scope

What does it mean	<p>Scope of research does not refer to the range of current research work at Phanous. It refers to the scope of our potential future research. It concerns anything happening at the cutting edge related to our products that we are not aware of.</p>
Why is it important	<p>If our scope of research is not greater than our current scope of work, then we are not leading the innovation process for the holding</p>
How will collaborations help to achieve it	<p>Not everything happening at the cutting edge is going to create value for us. For something to be included in our scope of research, we ought to have some least level of satisfaction that it is a viable value creation research. Collaborations are important because they help share the feasibility study process, thereby multiplying the effort.</p>
Objective Keywords	<ul style="list-style-type: none"> ● Futurist Research ● Feasibility and Viability ● Cutting edge

Table 3.1: Collaborations Objective: Research scope

O2. Value of research

What does it mean	Value of research refers to the value that lies within the research we are currently doing or has been done previously. There is almost always unlocked potential to release more value from our work and to maximise the return on investment that has been already made.
Why is it important	The more value we can instigate from investment already made, the higher returns we shall have per unit investment. As a privately owned research centre, maximizing ROI is a key objective.
How will collaborations help to achieve it	Projects defined in conjunction with existing research work, or those based on previous work, may lead to new insight into the work or new possibilities to apply the findings.
Objective Keywords	<ul style="list-style-type: none"> ● Value release ● Existing or previous projects ● ROI

Table 3.2: Collaborations Objective: Value of research

O3. Learning and development

What does it mean	Phanous researchers are encouraged to by continuously in learning and development. This refers to both soft and hard skills, but is especially essential in hard technical skills and knowledge in the respective specific scientific field.
Why is it important	If we don't learn and develop, we cannot remain innovative, relevant, and distinguished. In the long run, we will seize to create value and become a sending burden on the holding.
How will collaborations help to achieve it	Collaborations will expose us to new knowledge, knowhow, and tools. It will also promote development of soft skills.
Objective Keywords	<ul style="list-style-type: none"> ● Acquisition of novel knowledge, knowhow and tools ● Career path development ● Soft skills

Table 3.3: Collaborations Objective: Learning and development

O4. Branding

What does it mean	We are doing great work and we want people in the scientific and tech community to know about it
Why is it important	It will help us, and the holding attract and hire distinguished talent.
How will collaborations help to achieve it	Collaborations with distinguished national and international academic institutes will expose us to a vastly larger network of people.
Objective Keywords	<ul style="list-style-type: none"> • Distinguished talent hire • Dissemination of work • International Professional Network of excellence

Table 3.4: Collaborations Objective: Branding

3.2 *Collaboration Types*

WHILE COLLABORATIONS may occur in various forms, we formalize a limited number of collaboration models on which we capitalize to realise our objectives. The collaboration types are listed below and briefly discusses in the proceeding sections.

- T1. Research
- T2. Educational
- T3. Administrative
- T4. Financial

T1. Research

What is it	Purely technical collaborations focused on scientific research work
Examples	<ul style="list-style-type: none"> • Projects • Events • Exchanges • Competition
Objectives fulfilled	<ul style="list-style-type: none"> • Projects: Value of research, Research scope • Events: Value of research, Learning and development • Exchanges: Research scope, Learning and development • Competition: Value of research, Research scope

Table 3.5: Collaboration Types: Research

T2. Educational

What is it	Collaborations leading to educational benefits
Examples	<ul style="list-style-type: none"> • Design or delivery of courses • Accreditation of programmes • Workshops • Publishing
Objectives fulfilled	<ul style="list-style-type: none"> • Learning and development • Branding

Table 3.6: Collaboration Types: Educational

T3. Administrative

What is it	Collaborations in which Phanous utilises its executive and administrative capacity to partially or wholly assume executive ownership of work
Examples	<ul style="list-style-type: none"> • Co-organizations • Conferences • Publishing
Objectives fulfilled	<ul style="list-style-type: none"> • Value of research

Table 3.7: Collaboration Types: Administrative

T4. Financial

What is it	Collaborations in which Phanous provides financial contributions
Examples	<ul style="list-style-type: none"> • Sponsorships • Scholarships
Objectives fulfilled	<ul style="list-style-type: none"> • Sponsorships: Branding • Scholarships: Learning and development

Table 3.8: Collaboration Types: Financial

3.3 *Strategies*

OUR STRATEGY in fulfilling out collaboration objectives are inspired from the Phanous Research and Development Strategy plan ³. These are characterized by,

- S1. Focused
- S2. Facilitating
- S3. Innovative

HERE we briefly explain what each strategy implies.

³ Phanous. *The Katibeh*. Phanous Research and Innovation Centre, Tehran, Iran, 2019

S1. Focused

What does it mean	<p>Collaborations are not just a 'side' activity for us. They are instrumental and important to the development of Phanous. This means each instance of collaborations is given individual attention and we are committed and focused to the successful completion of each one.</p>	
How do we implement it	<ul style="list-style-type: none"> • We assign each collaboration a dedicated point of contact so that our partner(s) can swiftly follow up their queries. • We are timely in our follow up and processing of queries • We hold regular (monthly) feedback sessions with our collaborators. 	<p>Table 3.9: Collaboration Strategies: Focused</p>

S2. Facilitating

What does it mean	We are not a reactive collaboration partner. We proactively seek ways in which we can make collaborations easier and to facilitate their formation, occurrence, and completion.
How do we implement it	<ul style="list-style-type: none"> ● We commit to proactive knowledge sharing ● We are transparent in our communications and collaborations ● We are accountable for our commitments

Table 3.10: Collaboration Strategies: Facilitating

3.3. Innovative

What does it mean	<p>A fundamental core value of Phanous is that We are principally innovative in our processes and deliverables. This calls on us to always be innovative about how we can work better, more efficient and with higher added value.</p>	Table 3.11: Collaboration Strategies: Innovative
How do we implement it	<ul style="list-style-type: none"> • We decide on the terms of our collaborations interactively with our partners. We share our models and reach a decision in unison with our partners. • For each collaborative project we devise a roadmap, a part of which is an impact tree that determines the impact that each output of the project will have. 	

3.4 Getting Started

COLLABORATIONS with Phanous can be initiated by Phanous members or members of other institutions. The process in both cases is the same and the main steps are shown in Figure 3.1.

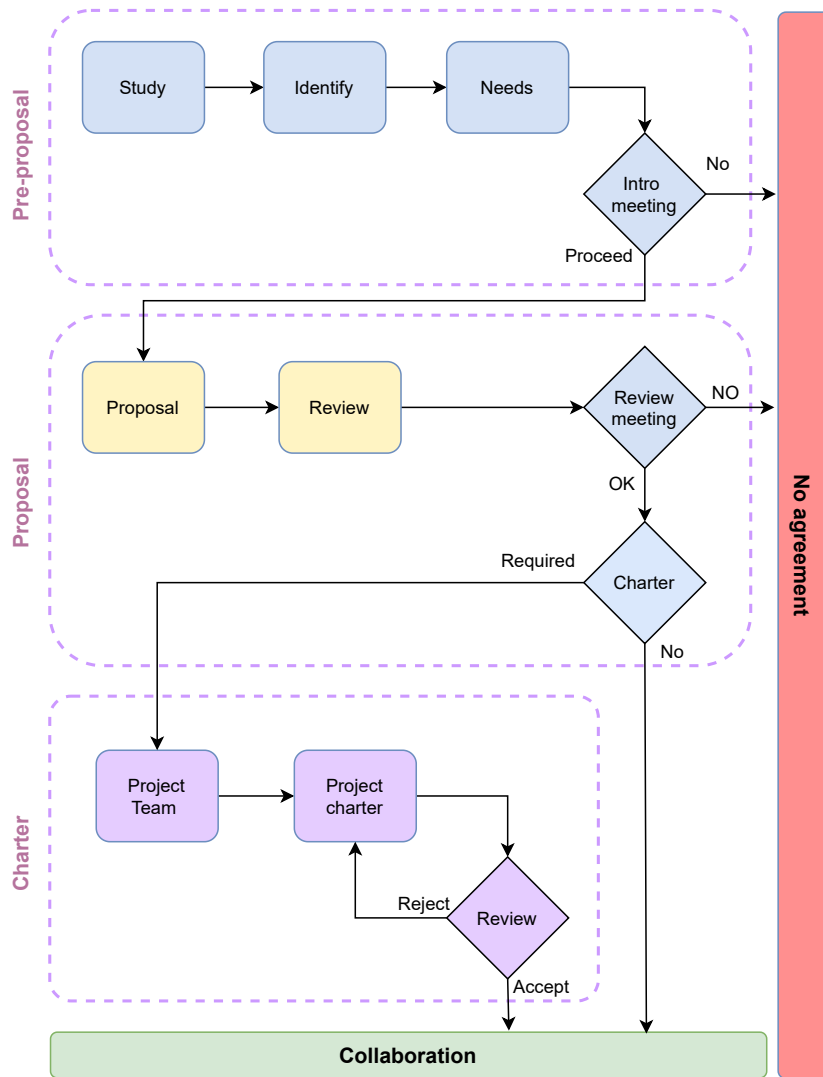


Figure 3.1: Collaborating with Phanous

3.5 *Pre-proposal*

THE PRE-PROSAL is an informal stage which is designed to assist our partners in preparing their collaboration proposals.

THIS STAGE has a few key steps outlined as follows;

1. Study the collaboration guidelines and familiarise yourself with important details such as; what are the types of collaboration we recognize and the objectives we seek to fulfill from each type.
2. Identify the type of collaboration which best matches the project you had in mind.
3. Sketch up a rough list of your requirements from Phanous.
4. Contact one of the Phanous Principal Investigators (PI) who will arrange for an informal introduction meeting. The meeting will not get into any details of the project and is instead used to verify that the proposed project has potential mutual interest. If this is not the case, the connection is terminated. Otherwise we proceed to the proposal stage.

3.6 Proposal

EACH COLLABORATION needs a documented proposal which is prepared in this stage. The proposal is prepared by the collaboration partner.

THE KEY steps in this stage are as follows;

1. The partner will prepare a collaboration proposal
2. The proposal is reviewed jointly by Phanous and the partner
3. If the proposal is fundamentally lacking in important details, the proposal is rejected and the connection is terminated.
4. If the proposal is agreed upon, it is then decided if a project charter is required or not. If a charter is not required, this marks the end of the process and project may start.
5. If a project charter is required, the process enter the third **charter** phase.

THE FACTORS which are used to decide if a charter is required or not are as follows,

- The scope of the project
- The complexity of the project
- The amount of resources required

SINCE collaborations assume several types and are designed to full-fill a range of objectives, we do not enforce a single template for all proposals. Partners are encouraged to write up their proposals in a manner they feel most befitting and beneficial to the type of collaboration being considered.

HOWEVER, there are key information which we look to see in all proposals. Phanosu recommendation to write a successful proposal is to pay attention to the following matters.

Backgrounds

Clearly state the **backgrounds** to this project, for example,

1. What is the background to this project?
2. What previous work has been done by the partner in this field?
3. Is this an extension of previous research carried out by the partner at another institute?
4. Is this collaboration a part of a larger project currently under way?

Relevancy

Clearly state the **relevancy** of this project, for example,

1. What type of collaboration is being proposed and what objectives are fulfilled?
2. How will this project lead to the fulfillment of the stated projects? Please pay close attention to the listed keywords listed under each objectives. These will help you identify the key features of each objectives.

Needs

Clearly state the **needs** of this project, for example,

1. What resources (time, human, equipment, data,..) are required and what will happen to them after the project has ended (for example in case of share data).
2. Are there other bodies who need to be notified or need to give permission?
3. Any legal agreements that need to be installed.

Outcomes

Clearly state the **outcomes** of this project, for example,

1. What outcomes will result from this work?
2. What are the time lines associated with the expected outcomes?
3. How will the outcomes be shared between partners?

Impact

Clearly state the **impact** of this project, for example,

1. What parts/products of the holding is most affected by this work?
2. How will the outcomes, impact the parts/products? (Here you may also find the objectives and keywords useful).
3. What are the risks associated with this project?

3.7 Charter

COLLABORATION projects perceived to be resource intensive, complex or wide in scope may be required to be accompanied by a project charter.

IN CASE a charter is required, the process is initiated by creation of a project team comprising Phanous representatives and our partner(s).

THE PROJECT TEAM will prepare the charter with the following conditions,

- Project charters are prepared according to the PMBOK standards⁴
- Project charters are prepared in collaboration between Phanous and our partner(s)
- Project charters are only ratified by mutual agreement of Phanous and our partner(s)

⁴ P. M. Institute. *Project Management Body of Knowledge (PMBOK Guide)*. Project Management Institute, Pennsylvania, sixth edition, 2017

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Affiliation

PHANOUS operates a progressive and transparent policy in relation to author affiliation on published work. According to our mission, vision and objectives, we feel that the following is a very fair basis for determining the author affiliations,

- An institution must be quoted as the author's affiliation in a publication if the institution has made a necessary and material contribution to, or provided a basis for the author's contribution to the published work.
- An institution should be listed as the primary affiliation if:
 1. Majority of the work in question has been done at the institution, or
 2. Majority of the research funding or resources has been provided by that institution
- Employment or supervisory responsibility may be considered as justification for crediting an institution, if the requirement in point 1 is met.
- Authors have a duty of care to declare and approve their affiliated institutions prior publication.

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