FORGE

Your Innovation &
Growth Partner

Accelerating **Technologies & Ventures,** powered by **Government & Industry** sponsored Open Innovation.

100+
Startups Incubated

200+
Product Innovations

₹10Cr+
Investments Won

50k+
Innovations
& Ventures Hub

Coimbatore
Chennai
Hosur

forgeforward.in

Small
Profitable
Business

A HIGH
GROWTH
ENTERPRISE

STARTUP

THE PROCESS FROM IDEA TO ENTERPRISE!

Do you have a Startup idea?

Are You Ready?

STARTUP IDEA

#1 Find a PROBLEM that is worth solving!

STARTUP IDEA

#2

Build a SOLUTION using TECH to solve that problem effectively in a simple, affordable, and reliable way!

STARTUP: <…> TO <…>

#1 PROBLEM

#2 PROTOTYPE

?

STARTUP IDEA

#3

Design this solution as a PRODUCT that is useful for any one that wants to solve that problem!

STARTUP IDEA

#4

Operate a BUSINESS to manufacture and sell this product making PROFITS and achieving GROWTH

A BIG LEAP!

A BIG LEAP!

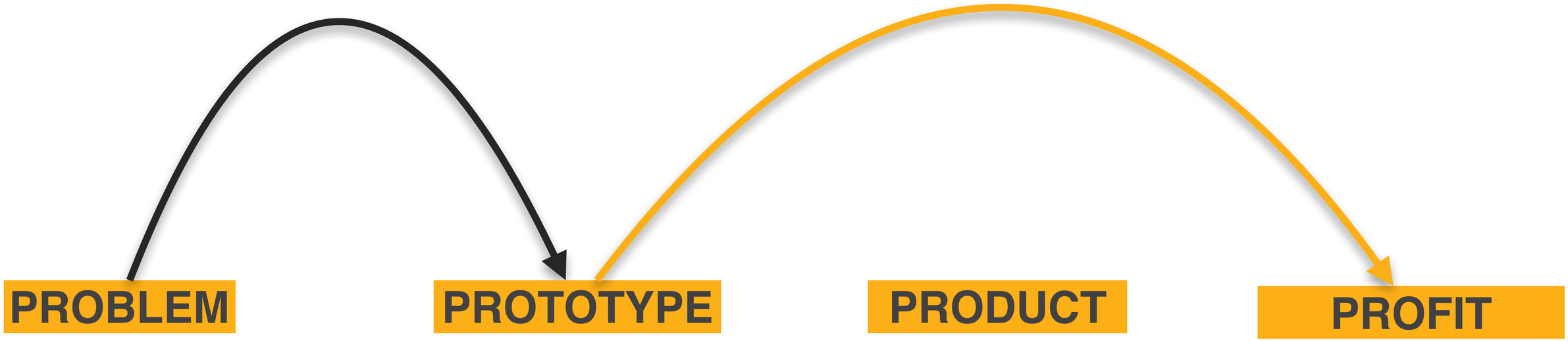
STARTUP: IDEA TO BUSINESS

#1 PROBLEM

#2 PROTOTYPE

#3 PRODUCT

#4 PROFIT



Innovation

Entrepreneurship

Innovation

INNOVATION...

Solving real-world **problems** using **technology**, leading to progress, change (development), prosperity, and profit!

Which Innovations will win?

ONLY CRITERIA:
‘HIGHEST TARGET REVENUE IN 3 YEARS’

WHAT PRICE WILL THE PRODUCT SELL IN THE MARKET FOR?

How much is The

TARGET CUSTOMER WILLING TO PAY FOR MY SOLUTION?

YOUR SOLUTION WORTH

=

VALUE

How to get your target customer to experience value?

NEED A PROTOTYPE!

PoC

‘Proof-of-Concept’

?

MUP

MINIMUM
USABLE
PROTOTYPE

MINIMUM USABLE PROTOTYPE

+ USEFUL
+ USABLE
+ DEPLOYABLE
+ TECHNICALLY FEASIBLE

PROTOTYPE

TO TEST VALUE,

NOT FEATURES!

Manage Innovation

Manage Innovation = Manage Risks

Innovations come with inherent **risks**.

The primary responsibility of the innovator is to **identify, mitigate and manage** these risks in a systematic manner, by taking adequate feedback from the customers individually and from the market as a whole.

Any Product Innovation is associated with the following risk factors:

#1 **Problem definition** & **Customer selection** and **specificity**

#2 Problem **significance** & **magnitude**

#3 **Motivation level** of target customer to solve the defined problem

#4 Quantification & its acceptance by the target customer of the **value proposition** offered by the innovation

#5 **Adoption barriers** that will prevent target customer from experiencing the value proposition

Product Innovation Rubric (PIR) & PIR Score

A diagnostic tool to guide innovators through a fast-tracked process of validating inherent risks by linking their progress to customer-motivation, customer-acceptance, and customer-commitment, and thereby evaluating the true market potential of product innovations.

FORGE

PRODUCT INNOVATION RUBRIC

iTOOLS INNOVATION TOOLKIT

INNOVATION RISK FACTORS						
IS THE PROBLEM STATEMENT DEFINED CLEARLY?	» Vague definition of the problem but unable to understand a real-world use -case/scenario and end -users that face the problem; 2	» Only a generalized problem statement is indicated but without any indication of real-world use-case/scenario and end-users; 4	» A novel idea but purely technical in nature without a strong case for it being applied in a real-world problem/use-case scenario; 6	» Clearly defined problem statement as it is experienced by the beneficiary (beneficiaries) in the real-world but without a description or indication of significance/ magnitude; 10	» Clearly defined and validated problem statement with description of the significance and magnitude of the problem along with profile of different types of beneficiaries impacted by the problem; 20	
IS THIS PROBLEM WORTH SOLVING?	» Idea is about offering a very conventional product done several times before; 2	» A technical challenge in the form of a gap in existing systems/solutions/processes is described but without any specific description of a real-world use-case/scenario and end-users that face the problem; 4	» Conventionally solved problem but idea is about solving some minor gaps in the existing solutions; 8	» Unsolved problem but with limited problem significance/magnitude; 12	» Higher degree of problem significance/magnitude but relates to gaps/issues in the existing solutions in the market today; 14	» Unsolved problem with very high degree of significance/magnitude impacting multiple beneficiaries; 20
IS THE CHOSEN TARGET CUSTOMER (TYPE/PROFILE) STRONGLY MOTIVATED TO SOLVE THE PROBLEM?	» A generalised description of the beneficiary without any indication of a specific target-customer; 4	» A weak profile of the target customer (end-user) chosen is indicated along with a generalized description of use -case (problem scenario); 6	» The target customer (profile) selected for validation is not aware or convinced that the problem is critical to solve; 8	» The selected target customer has tried solving the problem and is actively looking for more effective/ complete solutions; 14	» The selected target customer has expressed interest to actively co-create an innovative solution; 20	
IS THE CORE VALUE PROPOSITION DEFINED, QUANTIFIED AND VALIDATED?	» Vague description of the target customer (end-user) but unable to understand how solving this problem offers any benefits; 2	» A generalised description of the beneficiary without indication of specific target customer but the benefits offered are too minimal or insignificant; 6	» A generalised description of the beneficiary without indication of specific target customer with reasonable benefits offered but not quantified; 10	» A compelling value proposition targeting a specific target customer but acks any validation in the form of user/customer feedback; 12	» A strong value proposition with quantified gains backed by strong validation from a reasonable number of target users/customers; 20	
IS THE MUP CONCEPT EFFECTIVE IN TESTING THE TARGET VALUE PROPOSITION?	» Vague definition of the solution without a specific set of outcomes that prove that the problem has been solved; 2	» Solution is presented purely from a technical point of view and will work in the lab but looks impractical for end-user adoption; 6	» Solution defined fits the tag of MUP in terms of offering only the core feature/ functionality to test/prove the value proposition, but has not been designed to overcome adoption barriers; 12	» A very cost effective MUP that can be prototyped rapidly to test the value proposition and shall overcome the adoption barriers; 20		

Product Innovation Hypothesis

A structured format to summarise cogently and succinctly the assumptions related to the most fundamental aspects of the product innovation, and encourage the innovators to continuously refine their hypotheses as they go through the process of problem validation, customer discovery, crafting and testing value proposition, and conceptualising MUP.

FORGE

PRODUCT INNOVATION HYPOTHESIS

TARGET CUSTOMER:

iTOOLS INNOVATION TOOLKIT

HYPOTHESIS	No. OF CUSTOMERS VALIDATED WITH
PROBLEM	0 / <5 / <10 / <20 / >=20
CONSTRAINTS & BARRIERS	0 / <5 / <10 / <20 / >=20
VALUE / BENEFITS	0 / <5 / <10 / <20 / >=20
SOLUTION & USABILITY	0 / <5 / <10 / <20 / >=20
PRICE	0 / <5 / <10 / <20 / >=20

PRODUCT INNOVATION HYPOTHESIS

TARGET CUSTOMER: Forest Department/NGos & Farmers

HYPOTHESIS

No. OF CUSTOMERS VALIDATED WITH

PROBLEM

- Due to the close proximity to forest regions, constant human & elephant conflicts leads to death of both human and elephant life.
- The farming lands in the region are regularly invaded by the elephant subjecting to heavy crop damages

- 0
- <5
- <10
- <20
- >=20

CONSTRAINTS & BARRIERS

- Forests are remote locations with limited **accessibility**
- Minimal or no **Product training** increases the adoption.People have limited or no technical **skills/expertise.**
- **Installation/Integration:** Zone coverage varies according to the different conditions and requires in-depth knowledge on the terrain.
- **Resource/materials:** many of the core forest areas lack proper network connectivity for long range communication. Being exposed to open weather, and harsh conditions of forest can damage the products. Theft/damage is major concern.

- 0
- <5
- <10
- <20
- >=20

VALUE / BENEFITS

- Data-driven planning can reduce, mitigate any loss of life or damages.
- NGOs can study the animal behaviours and work towards a long-term sustainable solution to avoid human-animal conflict.

- 0
- <5
- <10
- <20
- >=20

SOLUTION & USABILITY

- A real-time monitoring system with geotagging and notification features to provide early warnings by recognising the threat potential of the animal.
- Geotagging and wireless data transfer to patrols to get real-time alerts on any threats before intrusions occur.

- 0
- <5
- <10
- <20
- >=20

PRICE

- The product requires a one-time investment of INR 50,000 on a gateway for its working at a radius of ~10 Kms
- Each camera module to be installed in the Forest Fringes costs INR 15,000

- 0
- <5
- <10
- <20
- >=20

FORGE

PRODUCT INNOVATION RUBRIC

iTOOLS INNOVATION TOOLKIT

Jan 2018 - iCAMP

PIR Score : 18

INNOVATION RISK FACTORS						
IS THE PROBLEM STATEMENT DEFINED CLEARLY?	» Vague definition of the problem but unable to understand a real-world use-case/scenario and end-users that face the problem; 2	» Only a generalized problem statement is indicated but without any indication of real-world use-case/scenario and end-users; 4	» A novel idea but purely technical in nature without a strong case for it being applied in a real-world problem/use-case scenario; 6	» Clearly defined problem statement as it is experienced by the beneficiary (beneficiaries) in the real-world but without a description or indication of significance/ magnitude; 10	» Clearly defined and validated problem statement with description of the significance and magnitude of the problem along with profile of different types of beneficiaries impacted by the problem; 20	
IS THIS PROBLEM WORTH SOLVING?	» Idea is about offering a very conventional product done several times before; 2	» A technical challenge in the form of a gap in existing systems/ solutions/processes is described but without any specific description of a real-world use-case/scenario and end-users that face the problem; 4	» Conventionally solved problem but idea is about solving some minor gaps in the existing solutions; 8	» Unsolved problem but with limited problem significance/magnitude; 12	» Higher degree of problem significance/magnitude but relates to gaps/issues in the existing solutions in the market today; 14	» Unsolved problem with very high degree of significance/magnitude impacting multiple beneficiaries; 20
IS THE CHOSEN TARGET CUSTOMER (TYPE/PROFILE) STRONGLY MOTIVATED TO SOLVE THE PROBLEM?	» A generalised description of the beneficiary without any indication of a specific target-customer; 4	» A weak profile of the target customer (end-user) chosen is indicated along with a generalized description of use -case (problem scenario); 6	» The target customer (profile) selected for validation is not aware or convinced that the problem is critical to solve; 8	» The selected target customer has tried solving the problem and is actively looking for more effective/ complete solutions; 14	» The selected target customer has expressed interest to actively co-create an innovative solution; 20	
IS THE CORE VALUE PROPOSITION DEFINED, QUANTIFIED AND VALIDATED?	» Vague description of the target customer (end-user) but unable to understand how solving this problem offers any benefits; 2	» A generalised description of the beneficiary without indication of specific target customer but the benefits offered are too minimal or insignificant; 6	» A generalised description of the beneficiary without indication of specific target customer with reasonable benefits offered but not quantified; 10	» A compelling value proposition targeting a specific target customer but acks any validation in the form of user/customer feedback; 12	» A strong value proposition with quantified gains backed by strong validation from a reasonable number of target users/customers; 20	
IS THE MUP CONCEPT EFFECTIVE IN TESTING THE TARGET VALUE PROPOSITION?	» Vague definition of the solution without a specific set of outcomes that prove that the problem has been solved; 2	» Solution is presented purely from a technical point of view and will work in the lab but looks impractical for end-user adoption; 6	» Solution defined fits the tag of MUP in terms of offering only the core feature/functionality to test/ prove the value proposition, but has not been designed to overcome adoption barriers; 12	» A very cost effective MUP that can be prototyped rapidly to test the value proposition and shall overcome the adoption barriers; 20		

FORGE

PRODUCT INNOVATION RUBRIC

iTOOLS INNOVATION TOOLKIT

June 2018 - ProtoSem

PIR Score : 44

INNOVATION RISK FACTORS						
IS THE PROBLEM STATEMENT DEFINED CLEARLY?	» Vague definition of the problem but unable to understand a real-world use-case/scenario and end-users that face the problem; 2	» Only a generalized problem statement is indicated but without any indication of real-world use-case/scenario and end-users; 4	» A novel idea but purely technical in nature without a strong case for it being applied in a real-world problem/use-case scenario; 6	» Clearly defined problem statement as it is experienced by the beneficiary (beneficiaries) in the real-world but without a description or indication of significance/ magnitude; 10	» Clearly defined and validated problem statement with description of the significance and magnitude of the problem along with profile of different types of beneficiaries impacted by the problem; 20	
IS THIS PROBLEM WORTH SOLVING?	» Idea is about offering a very conventional product done several times before; 2	» A technical challenge in the form of a gap in existing systems/ solutions/processes is described but without any specific description of a real-world use-case/scenario and end-users that face the problem; 4	» Conventionally solved problem but idea is about solving some minor gaps in the existing solutions; 8	» Unsolved problem but with limited problem significance/magnitude; 12	» Higher degree of problem significance/magnitude but relates to gaps/issues in the existing solutions in the market today; 14	» Unsolved problem with very high degree of significance/magnitude impacting multiple beneficiaries; 20
IS THE CHOSEN TARGET CUSTOMER (TYPE/PROFILE) STRONGLY MOTIVATED TO SOLVE THE PROBLEM?	» A generalised description of the beneficiary without any indication of a specific target-customer; 4	» A weak profile of the target customer (end-user) chosen is indicated along with a generalized description of use -case (problem scenario); 6	» The target customer (profile) selected for validation is not aware or convinced that the problem is critical to solve; 8	» The selected target customer has tried solving the problem and is actively looking for more effective/ complete solutions; 14	» The selected target customer has expressed interest to actively co-create an innovative solution; 20	
IS THE CORE VALUE PROPOSITION DEFINED, QUANTIFIED AND VALIDATED?	» Vague description of the target customer (end-user) but unable to understand how solving this problem offers any benefits; 2	» A generalised description of the beneficiary without indication of specific target customer but the benefits offered are too minimal or insignificant; 6	» A generalised description of the beneficiary without indication of specific target customer with reasonable benefits offered but not quantified; 10	» A compelling value proposition targeting a specific target customer but acks any validation in the form of user/customer feedback; 12	» A strong value proposition with quantified gains backed by strong validation from a reasonable number of target users/customers; 20	
IS THE MUP CONCEPT EFFECTIVE IN TESTING THE TARGET VALUE PROPOSITION?	» Vague definition of the solution without a specific set of outcomes that prove that the problem has been solved; 2	» Solution is presented purely from a technical point of view and will work in the lab but looks impractical for end-user adoption; 6	» Solution defined fits the tag of MUP in terms of offering only the core feature/functionality to test/ prove the value proposition, but has not been designed to overcome adoption barriers; 12	» A very cost effective MUP that can be prototyped rapidly to test the value proposition and shall overcome the adoption barriers; 20		

FORGE

PRODUCT INNOVATION RUBRIC

iTOOLS INNOVATION TOOLKIT

May 2019 - LaunchPad

PIR Score : 86

INNOVATION RISK FACTORS						
IS THE PROBLEM STATEMENT DEFINED CLEARLY?	» Vague definition of the problem but unable to understand a real-world use-case/scenario and end-users that face the problem; 2	» Only a generalized problem statement is indicated but without any indication of real-world use-case/scenario and end-users; 4	» A novel idea but purely technical in nature without a strong case for it being applied in a real-world problem/use-case scenario; 6	» Clearly defined problem statement as it is experienced by the beneficiary (beneficiaries) in the real-world but without a description or indication of significance/ magnitude; 10	» Clearly defined and validated problem statement with description of the significance and magnitude of the problem along with profile of different types of beneficiaries impacted by the problem; 20	
IS THIS PROBLEM WORTH SOLVING?	» Idea is about offering a very conventional product done several times before; 2	» A technical challenge in the form of a gap in existing systems/ solutions/processes is described but without any specific description of a real-world use-case/scenario and end-users that face the problem; 4	» Conventionally solved problem but idea is about solving some minor gaps in the existing solutions; 8	» Unsolved problem but with limited problem significance/magnitude; 12	» Higher degree of problem significance/magnitude but relates to gaps/issues in the existing solutions in the market today; 14	» Unsolved problem with very high degree of significance/magnitude impacting multiple beneficiaries; 20
IS THE CHOSEN TARGET CUSTOMER (TYPE/PROFILE) STRONGLY MOTIVATED TO SOLVE THE PROBLEM?	» A generalised description of the beneficiary without any indication of a specific target-customer; 4	» A weak profile of the target customer (end-user) chosen is indicated along with a generalized description of use -case (problem scenario); 6	» The target customer (profile) selected for validation is not aware or convinced that the problem is critical to solve; 8	» The selected target customer has tried solving the problem and is actively looking for more effective/ complete solutions; 14	» The selected target customer has expressed interest to actively co-create an innovative solution; 20	
IS THE CORE VALUE PROPOSITION DEFINED, QUANTIFIED AND VALIDATED?	» Vague description of the target customer (end-user) but unable to understand how solving this problem offers any benefits; 2	» A generalised description of the beneficiary without indication of specific target customer but the benefits offered are too minimal or insignificant; 6	» A generalised description of the beneficiary without indication of specific target customer with reasonable benefits offered but not quantified; 10	» A compelling value proposition targeting a specific target customer but acks any validation in the form of user/customer feedback; 12	» A strong value proposition with quantified gains backed by strong validation from a reasonable number of target users/customers; 20	
IS THE MUP CONCEPT EFFECTIVE IN TESTING THE TARGET VALUE PROPOSITION?	» Vague definition of the solution without a specific set of outcomes that prove that the problem has been solved; 2	» Solution is presented purely from a technical point of view and will work in the lab but looks impractical for end-user adoption; 6	» Solution defined fits the tag of MUP in terms of offering only the core feature/functionality to test/ prove the value proposition, but has not been designed to overcome adoption barriers; 12	» A very cost effective MUP that can be prototyped rapidly to test the value proposition and shall overcome the adoption barriers; 20		

PRODUCT INNOVATION HYPOTHESIS

TARGET CUSTOMER: **Forest Department/NGos & Farmers**

iTOOLS INNOVATION TOOLKIT

HYPOTHESIS

No. OF CUSTOMERS VALIDATED WITH

PROBLEM

- Due to the close proximity to forest regions, constant human & elephant conflicts leads to death of both human and elephant life.
- The farming lands in the region are regularly invaded by the elephant subjecting to heavy crop damages

- [ ] 0
- [ ] <5
- [ ] <10
- [ ] <20
- [x] >=20

CONSTRAINTS & BARRIERS

- Forests are remote locations with limited **accessibility**
- Minimal or no **Product training** increases the adoption.People have limited or no technical **skills/expertise.**
- **Installation/Integration:** Zone coverage varies according to the different conditions and requires in-depth knowledge on the terrain.
- **Resource/materials:** many of the core forest areas lack proper network connectivity for long range communication. Being exposed to open weather, and harsh conditions of forest can damage the products. Theft/damage is major concern.

- [ ] 0
- [ ] <5
- [ ] <10
- [x] <20
- [ ] >=20

VALUE / BENEFITS

- Data-driven planning can reduce, mitigate any loss of life or damages.
- NGOs can study the animal behaviours and work towards a long-term sustainable solution to avoid human-animal conflict.

- [ ] 0
- [ ] <5
- [ ] <10
- [x] <20
- [ ] >=20

SOLUTION & USABILITY

- A real-time monitoring system with geotagging and notification features to provide early warnings by recognising the threat potential of the animal.
- Geotagging and wireless data transfer to patrols to get real-time alerts on any threats before intrusions occur.

- [ ] 0
- [ ] <5
- [ ] <10
- [x] <20
- [ ] >=20

PRICE

- The product requires a one-time investment of INR 50,000 on a gateway for its working at a radius of ~10 Kms
- Each camera module to be installed in the Forest Fringes costs INR 15,000

- [ ] 0
- [x] <5
- [ ] <10
- [ ] <20
- [ ] >=20

What increased the PIR Score?

- Customer **Motivation**
- Customer **Commitment**
- Customer **Acceptance**

SOCIAL MEDIA PLATFORMS

For Queries/Feedbacks, please reach us at

Forge Accelerator

@forge_accelerator

@FORGE_FORCE

Forge Accelerator

Learning Summary

#1 Any idea can be refined/potential enhanced to become a startup idea

#2 Startup is a scientific process to convert an idea into a high growth enterprise

#3 Minimum Usable Prototype, prototype to prove value to the target customer

#4 Managing Innovation = Managing Risk

#5 Product Innovation Rubric, a Compass to guide your Innovation Journey

RESOURCES

For Resource Materials, visit

www.protosem.tech/resources

FORGE®