



Workshop on product testing for innovation startups

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What will this workshop cover?

- Why product testing
- When product testing
- Where product testing
- Connection with market research
- Class exercise to build your product test plan
- Product test plan template
- Interactive review of three case studies
- Discussion
- Format of product/service test report



Why Product Testing

- Develop confidence that product meets customer expectation
- Reduce risk of performance and/or quality failure
- Fix any deficiencies before customers experience them
- Protect the reputation and brand of your startup
- Encourage angel investors to back you based on process and results
- Save costs huge associated with failed market entries



When is Product Testing needed?

Before building it

Product Concept Testing

Test the product concept before building it

Key Activities

- Market research
- Concept testing

Focus

- External

While building it

Design Verification Testing

Test that product functions as per design

Key Activities

- Functional Testing
- Non Functional Testing

Focus

- Internal

After building it

Product Acceptance Testing

Test that product meets market expectations

Key Activities

- User Acceptance Testing
- Market Acceptance Testing

Focus

- External

Where is Product Testing done?

External focus

Product Concept Testing

Key Questions

- Who/where are the customers?
- How much do they value it?
- Is there a commercial opportunity?

Methodology

- Expert feedback
- Focus groups
- Surveys

Internal focus

Design Verification Testing

Key Questions

- Does it function as envisioned?
- Does it meet all design requirements?

Methodology

- Lab testing
- Paid testers
- Third party validation

External focus

Product Acceptance Testing

Key Questions

- Does it meet customer expectations
- Does it meet market expectations

Methodology

- Focus groups
- Expert feedback
- Customer panels
- Free trials
- Test marketing

Connection with Market Research

Startup Research Lifecycle



Outputs

- Willingness to pay
- Market size

Outputs

- Segmentation
- Customer personas
- Adoption model
- Mar Comm Strategy

Outputs

- Alternate products
- Channels
- Market Forces
- Regulations
- Taxation

Outputs

- Competition survey
- Benchmark
- Channel selection

Outputs

- Marketing campaigns
- Sales funnel
- Order fulfillment
- Customer satisfaction

What to sell?

Who to sell to first?

Where to sell?

How to communicate?

Market research determines Product specification (WHAT TO SELL) for:

- **Minimum Viable Product (MVP), or**
- **Minimum Awesome Product (MAP)**

Class Exercise: Drafting a Product Testing Plan

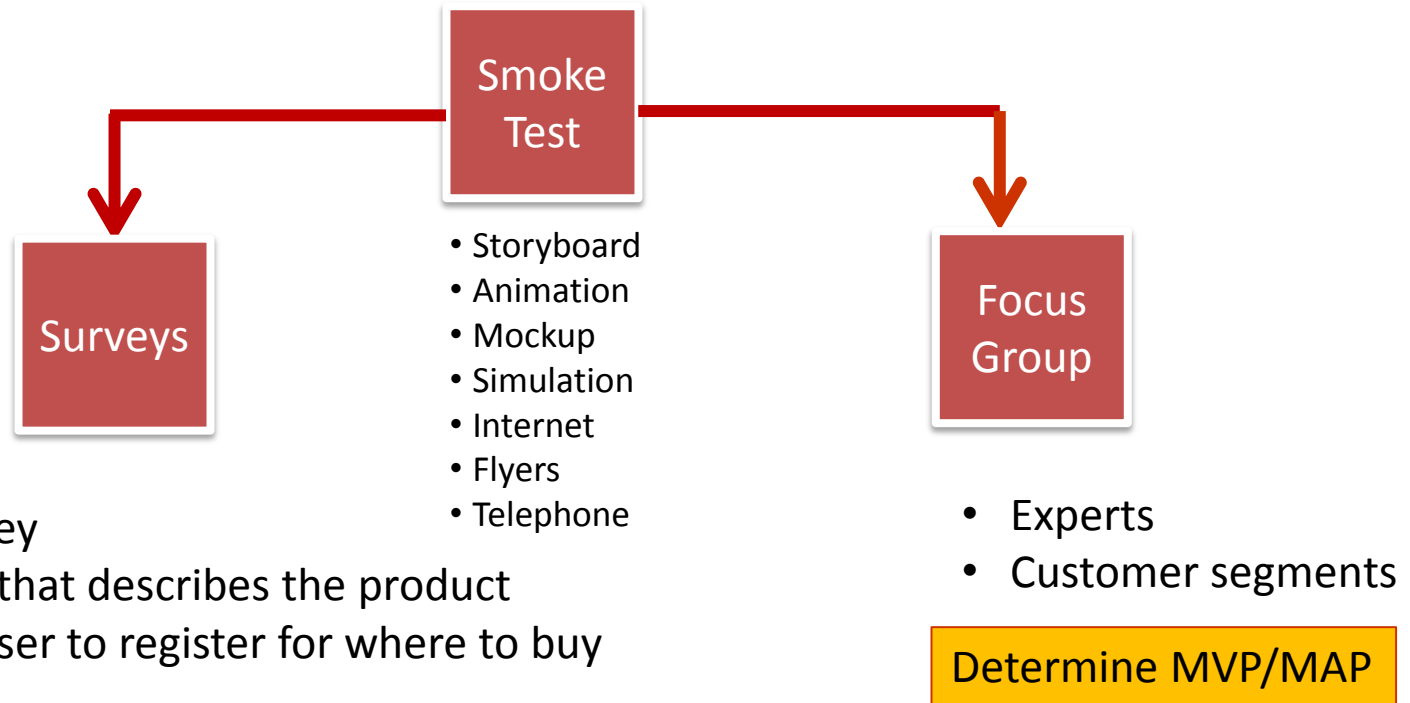
The next few slides will be used in an interactive discussion to help you develop your draft Product Test Plan in this class.

- Please use the following format:

| Sections | Pre-build | Build | Post Build |
|-----------------|--------------------------------|-----------------------------|------------------------------------|
| Purpose | To create MVP/MAP design specs | Design verification Testing | User and Market acceptance Testing |
| Test | | | |
| Methodology | | | |
| Resources | | | |
| Budget | | | |
| Timeline | | | |

Product Concept Testing

A smoke test is a method for determining if there is sufficient customer demand for a given value proposition of a product or service to justify building the actual product or service.



Examples:

- WTP Survey
- A website that describes the product and asks user to register for where to buy

Validate Commercial Demand

Please fill in Prebuild column in the draft Product Test Plan

Design Verification Testing

Functional Testing

Demonstrates what the product/service does

- Component testing
- System testing
- White box testing
- Black box testing
- Integration testing

Non Functional Testing

How well the product/service behaves

- Baseline testing
- Compliance testing
- Usability testing
- Performance testing
- Stress testing
- Endurance testing

Please fill in build column in the draft Product Test Plan

Product Acceptance Testing

Does it meet customer expectations?

- ✓ Aesthetics
- ✓ Ease of use
- ✓ Quality
- ✓ Performance
- ✓ Price

Does it meet market expectations

- ✓ International benchmark
- ✓ Domestic benchmark



Focus Groups
use for a fresh perspective

Vs.



Customer Panels
use for ongoing input



Please fill in Post build column in the draft Product Test Plan

Test Marketing

Great way to test customer value perception before actual launch

Controlled test market

A few stores have agreed to carry product for a fee

Simulated test market

Test in a simulated shopping environment to be sample of consumers

SalesWave Research

Offer product free then increase price to assess reaction



Examples

Standard test market

A full marketing campaign in a limited area

Please fill in Prebuild column in the draft Product Test Plan

Case studies

We will now develop conceptual product test plans for the following three case studies:

1. **CASA1** - A proprietary ECD program that is licensed to teacher-entrepreneurs who are trained to setup and operate their ECD center profitably
2. **CASA2**- A Internet based tuition academy that provides low cost live teacher based tutoring for matric and intermediate collegiate education
3. **CASA3**- An Ed tech company that is building a kit that allows students to design and make programmable robots

Research Questions

| Activity | Pre Build | Build | Post Build |
|-----------|--|---|---|
| Question | Is there sufficient commercial demand for the product? | Does the product work as expected by the startup? | Does the product meet customer and market expectations? |
| Answer in | Report or presentation | Report or presentation | Report or Presentation |
| Audience | Investor | Investor | Investor |

CASA1 – ECD Centers

| Section | Pre Build | Build | Post Build |
|-------------|---|---|--|
| Purpose | To ensure product is perceived positively | To demonstrate functionality and ensure product is user friendly | To gauge and react to customer perception |
| Tests | Story board discussions of design after market research (international and domestic benchmarking) | Setup model center and test components as they are developed so that feedback is used to improve design of subsequent modules | Pre launch franchise program offer <ul style="list-style-type: none"> • half price • refund fee if not satisfied |
| Methodology | Evaluation | User testing | Test marketing |
| Resources | ECD experts (educationists, psychologists); focus groups (parents) | Paid entrepreneur-teacher | Potential customers |
| Budget | \$500 | \$5,000 | \$5,000 |
| Timeline | One week | Continuous testing for one year | 3 months |

CASA2 – Internet tuition academy

| Section | Pre Build | Build | Post Build |
|-------------|---|---|--|
| Purpose | To investigate customer demand | To assess quality of offering | To gauge and react to customer perception |
| Tests | Facebook page/webpage advertisement of product as if it exists that captures interested customer email ID | Test product experience vs. chosen alternate benchmark (baseline testing) | Offer free trail of services to all that agree to pre and post testing |
| Methodology | Smoke test | User testing | Test marketing |
| Resources | Intern | Paid tester | Potential customers |
| Budget | \$100 | \$1,000 | \$500 |
| Timeline | One week | 2 weeks | 1 month |

CASA3 – EdTech Robots Kit

| Section | Pre Build | Build | Post Build |
|-------------|--|--|---|
| Purpose | To ensure product is perceived positively | To demonstrate functionality and ensure product is user friendly | To gauge and react to customer perception |
| Tests | Story board discussions | Test functionality vs. chosen benchmark (baseline testing) | Invitation only robot mela |
| Methodology | Evaluation | User testing | Test marketing |
| Resources | Experts (educationists, psychologists); focus groups (parents) | Paid testers | Potential customers |
| Budget | \$500 | \$500 | \$500 |
| Timeline | One week | Three weekends | Three weekends |

Class Discussion

How have the case study discussions caused you to modify your Product test Plan?

Format of the Test Reports

- 1. Purpose**
- 2. Methodology**
- 3. Work Plan**
- 4. Analysis**
- 5. Results**
- 6. Appendix**
 - Raw data organized in Charts
 - Test details
 - Research questions
 - Data normalization and scrubbing
 - Quality checks
 - Others

