



Prototyping and iterative thinking

Vinay Dabholkar

vinay@catalign.in

www.catalign.in

1

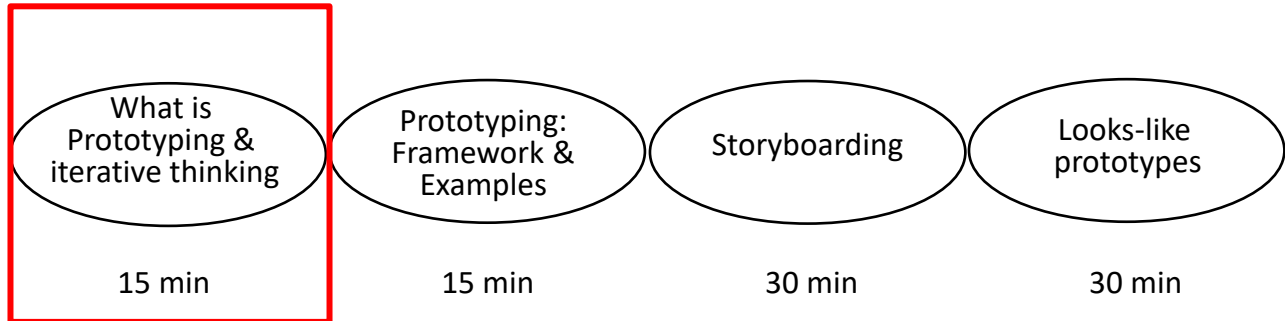
Warm-up question

What idea are you working on?
(Type your idea in the chat window)

www.catalign.in

2

Agenda



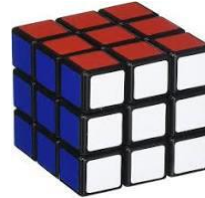
Prototyping and iterative thinking

Problem solving

Problem



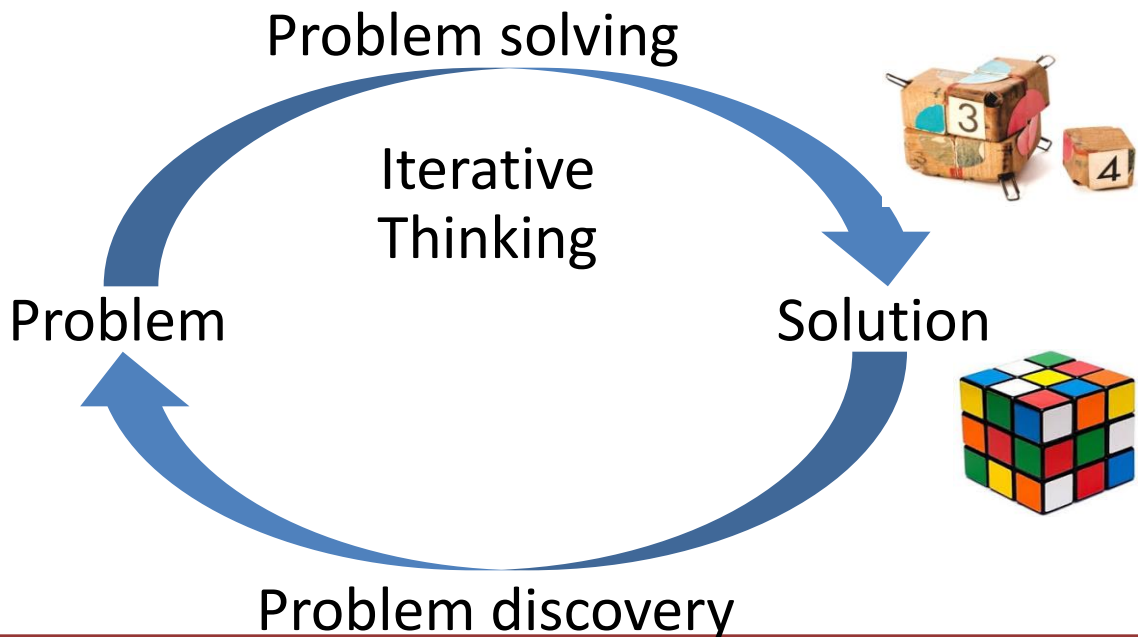
Solution



Linear Thinking

www.catalign.in

5

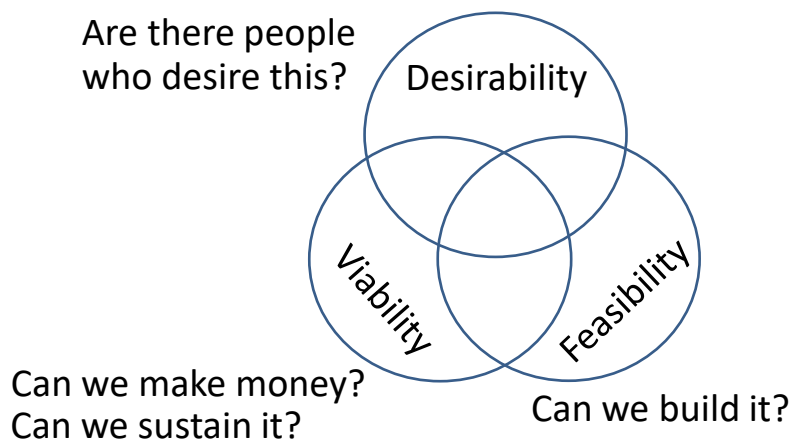


<https://edition.cnn.com/2012/10/10/tech/rubiks-cube-inventor/index.html>

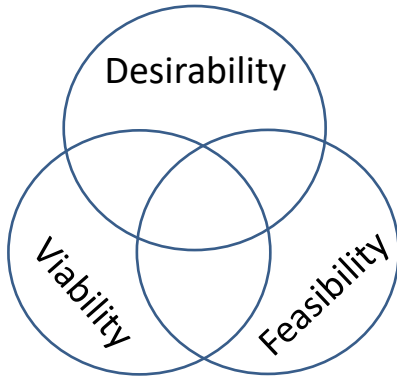
6

Which is harder problem-solving or problem-discovery?

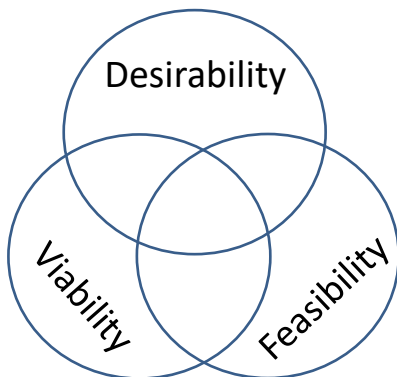
Innovation as a process of hypothesis testing



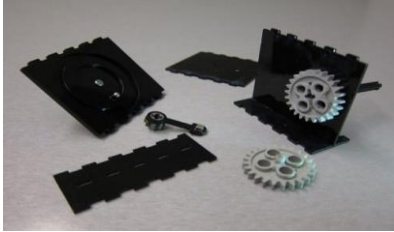
Can we look at it as one big circle
instead of 3 circles?



Where do you want to begin?



Watch for the blind



<20 Lego



3D printed



How does it look?

Sick of using things made for the blind

www.catalign.in

11



"I went through more than 50 iterations!"
--Hyungsoo Kim

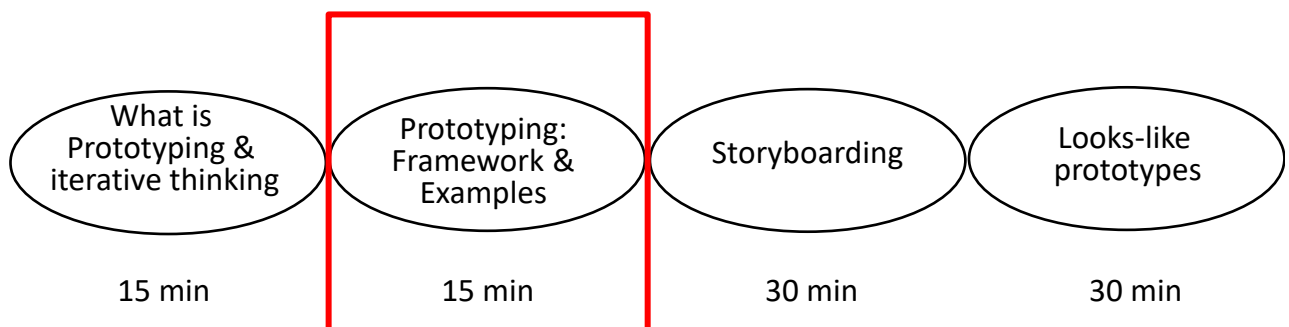
"Fail fast, fail inexpensively"

<https://www.youtube.com/watch?v=PWI4yvMwOel>

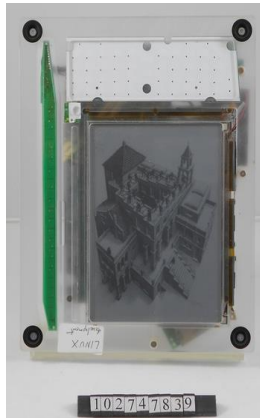
12



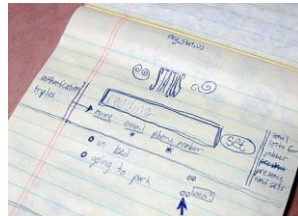
Agenda



Which product is this prototype of?



1



2



3



4



5

www.catalign.in

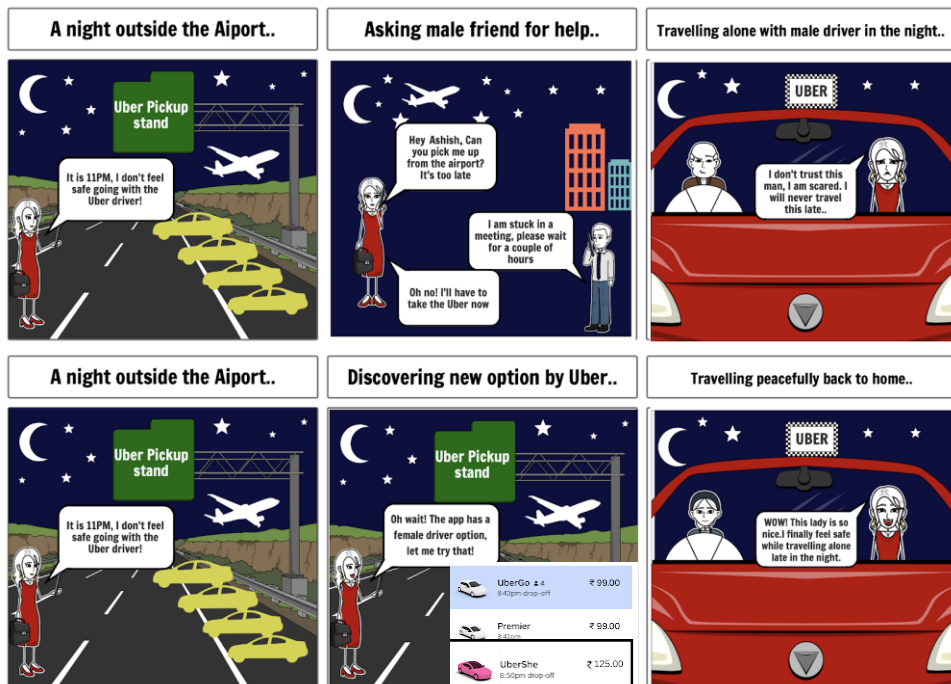
15

Rapid Prototyping: 1-hour, 1-day, 1-week options

	Feels-like	Looks-like	Works-like
1-hour	<p>Before</p> <p>After</p> <p>storyboard</p>	<p>wireframe, sketch, layout</p>	<p>Substitute sample</p>
1-day	<p>Skit, video, fudging</p>	<p>wireframes, 3D model</p>	<p>Partial working model</p>
1-week	<p>Take a tour of your new restaurant</p> <p>Studio, Video</p>	<p>Screen shots, 3D print</p>	<p>Partial working model</p>

16

Feels-like prototype: A storyboard

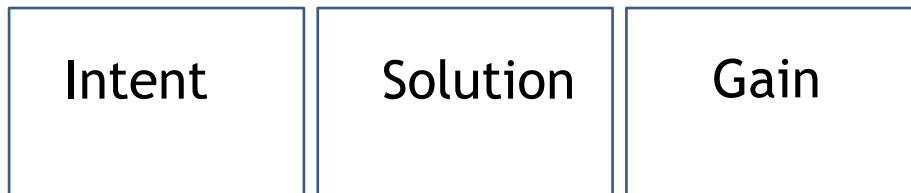


Before-and-after: A template

Before



After



Storyboard: A checklist

1. Is intent clear through a thought bubble?
2. Are there people in the story?
3. Is the context (place) clear?
4. Is the pain clear?
5. Why did the situation change (solution)?

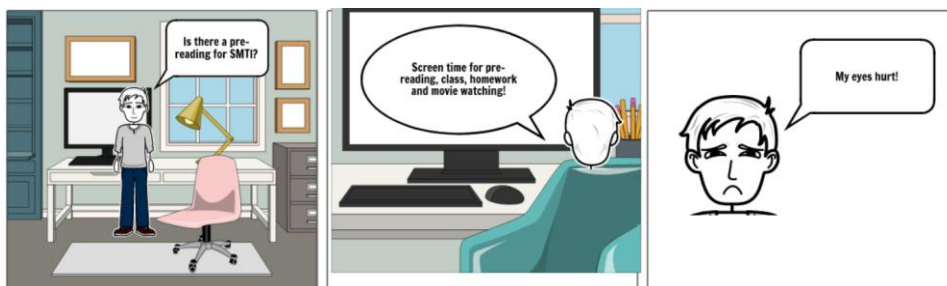
High screen-time: 5 min version



www.catalign.in

21

High screen-time: A 15 min version

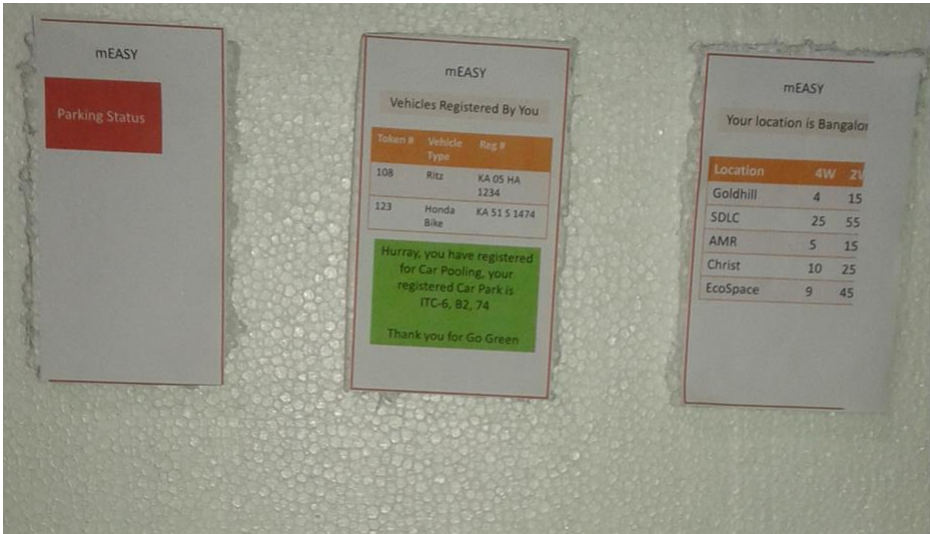


Create your own at Storyboard That

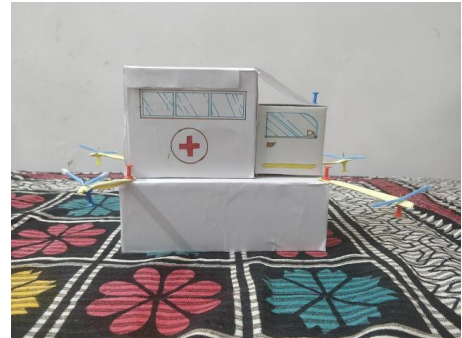
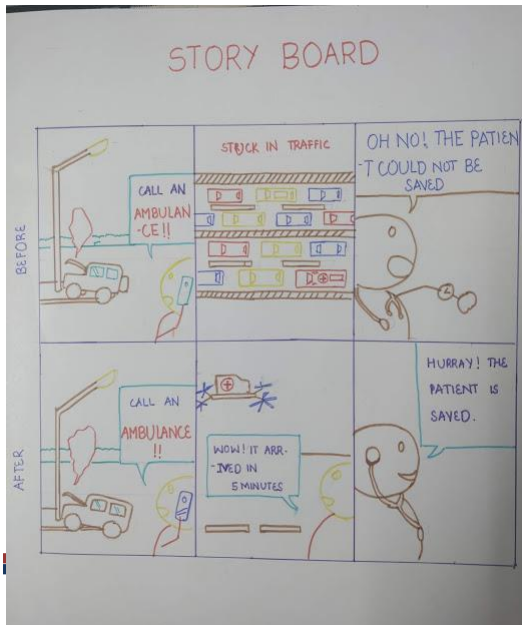
www.catalign.in

22

Looks-like prototype

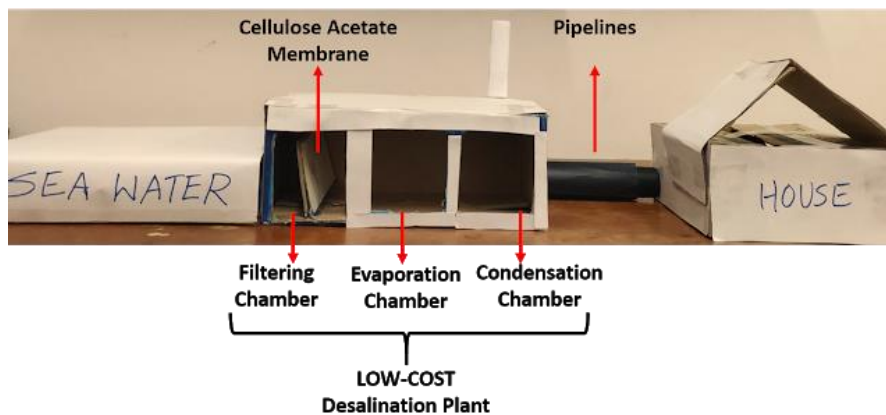


Helicopter ambulance



www.catalign.in

25



www.catalign.in

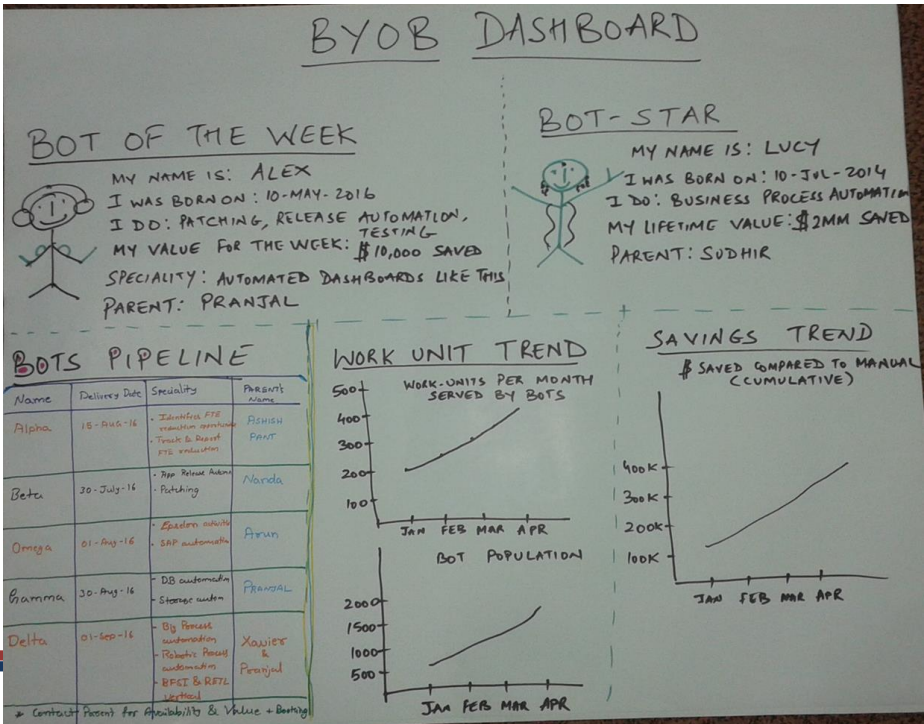
26

Sports facility shared model



www.catalign.in

27



28



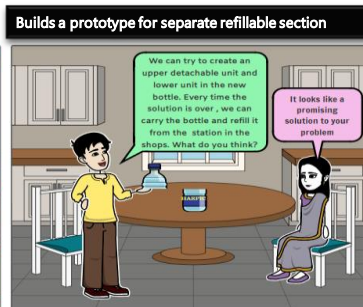
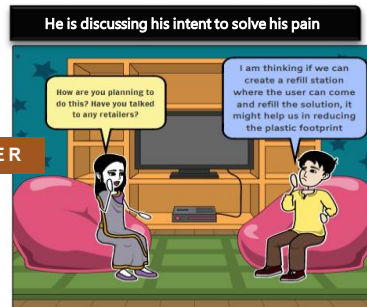
29

1: Plastic waste: Before-and-after storyboard

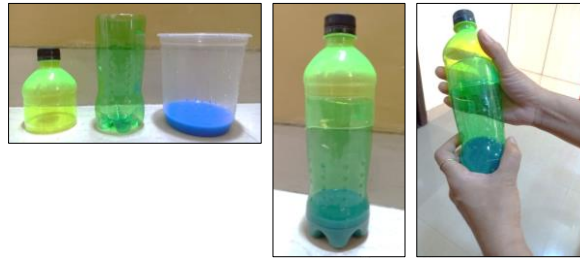
BEFORE



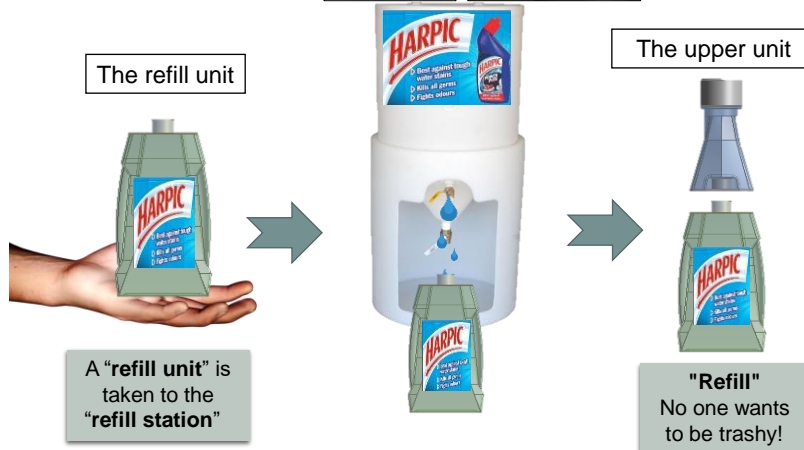
AFTER



Prototype 1



Prototype 2 CAD model



2: Wearable sanitizer dispenser



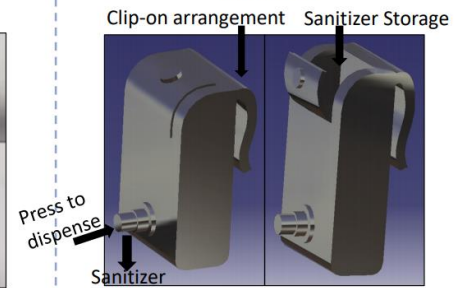
Proto-1



Proto-2

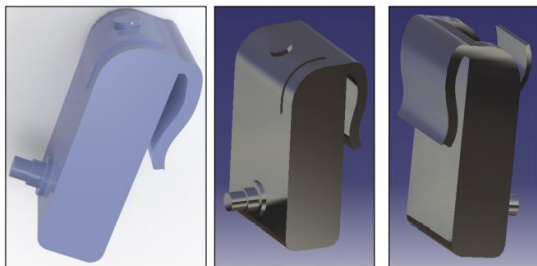


Proto-3



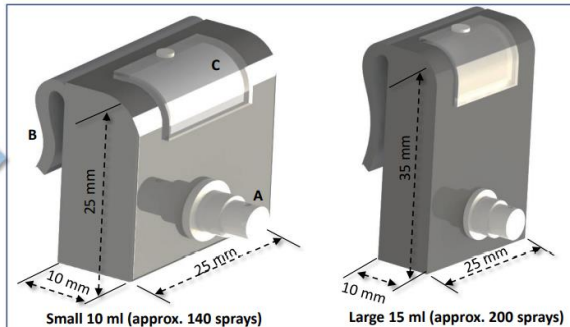
Feedback

- Option of different Sizes
- The sanitizer should be Portable
- Reduce the width of the product
- Women wouldn't be using wrist-watch always – alternative for that ?



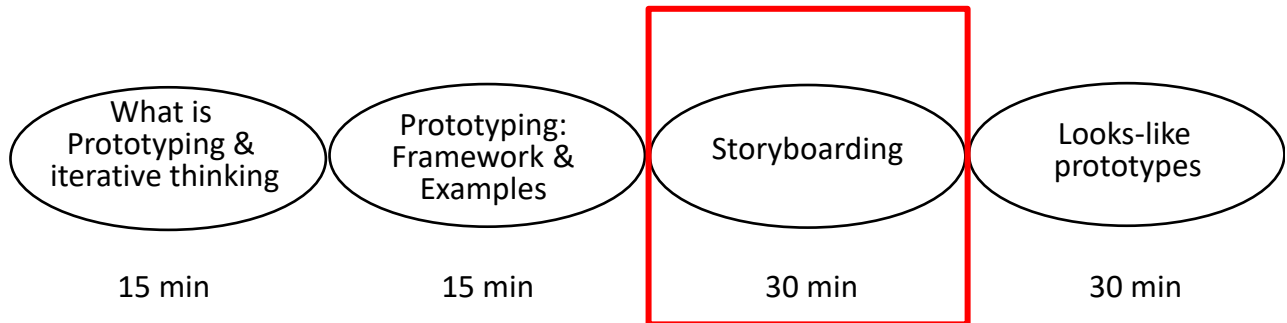
Modifications

- Introduced **two sizes** – Small (10ml) & Large (15ml)
- Modified design of spray and body
- Reduced width from 20 mm to 10 mm
- Modified clip-on/hook design to provide for strapping on handbags/belts



A - Spray for dispensing; B - Clip-on arrangement; C - Cap for refilling

Agenda

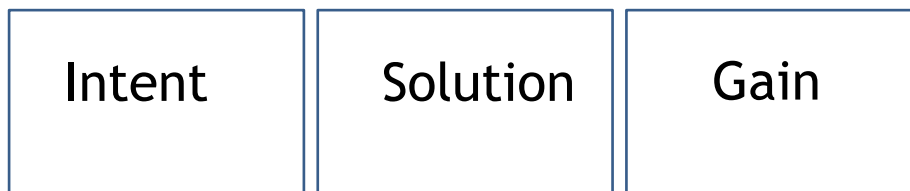


Before-and-after: A template

Before



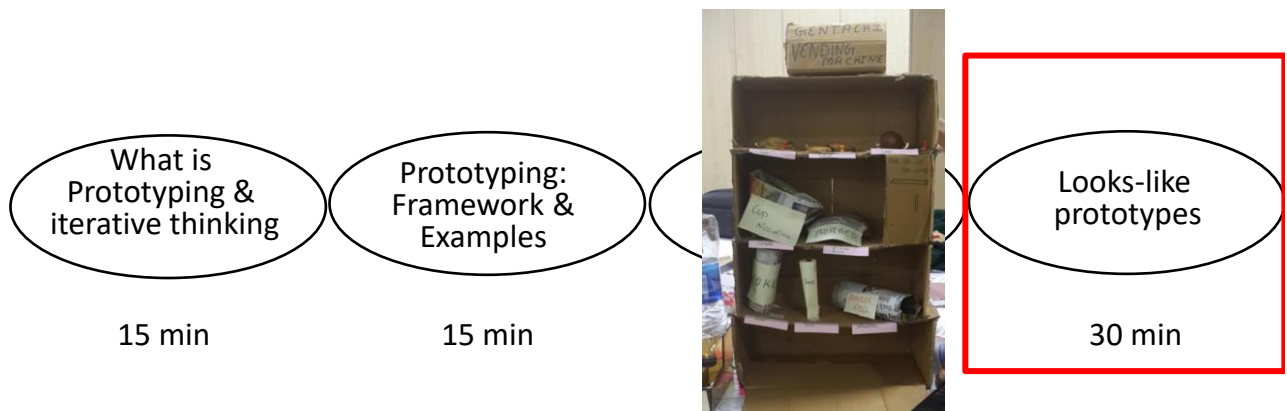
After



Storyboard: A checklist

1. Is intent clear through a thought bubble?
2. Are there people in the story?
3. Is the context (place) clear?
4. Is the pain clear?
5. Why did the situation change (solution)?

Agenda



Thank You