Design Knowledge

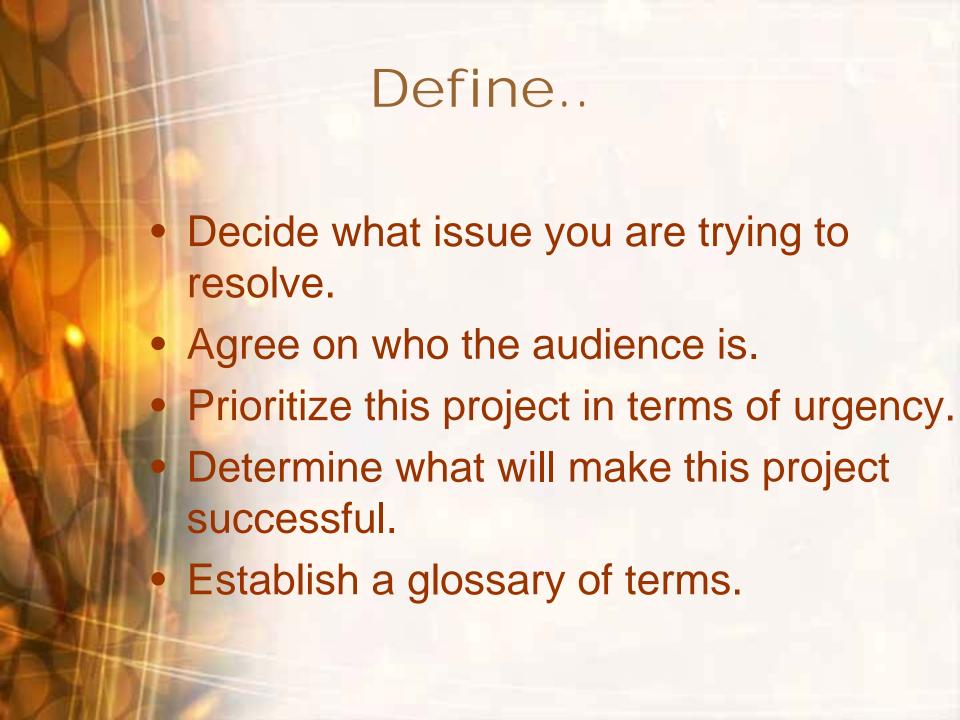## The value of thinking..

What is Design Thinking?

- Herbert Simon, in the *Sciences of the Artificial* has defined "design" as the "transformation of existing conditions into preferred ones".

- Design thinking is, then, always linked to an improved future..

- Unlike critical thinking, which is a process of analysis and is associated with the 'breaking down' of ideas, design thinking is a creative process based around the 'building up' of ideas.

- There are no judgments in design thinking. This eliminates the fear of failure and encourages maximum input and participation. Wild ideas are welcome, since these often lead to the most creative solutions.

What's your process..?

- Design is about exploring one's self, everyone has a methodology, a preferred angle and even their own bias; but as a rule you follow these steps:

- **Define | Research | Ideate | Prototype | Choose | Implement | Learn.**

- Perhaps this is what makes design a fascinating and evolving subject.

Solving problems..

- Within these seven steps, problems can be framed, the right questions can be asked, more ideas can be created, and the best answers can be chosen. The steps aren't linear; they can occur simultaneously or be repeated.

- Although design is always subject to personal taste, design thinkers share a common set of values that drive innovation: these values are mainly creativity, ambidextrous thinking, teamwork, end-user focus, curiosity.

- This method of thinking and cognition is a big area of academic research – approaches and knowledge in this area are largely **Tacit** and therefore difficult to define.

Define..

- Decide what issue you are trying to resolve.
- Agree on who the audience is.
- Prioritize this project in terms of urgency.
- Determine what will make this project successful.
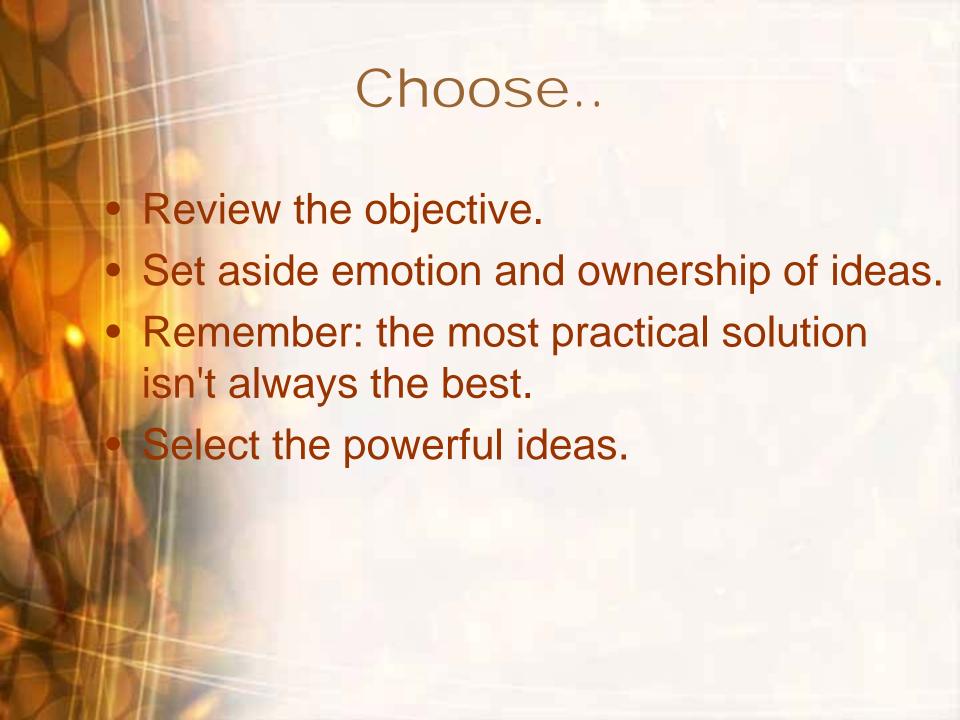- Establish a glossary of terms.

Research..

- Review the history of the issue; remember any existing obstacles.
- Collect examples of other attempts to solve the same issue.
- Note the project supporters, investors, and critics.
- Talk to your end-users, that brings you the most fruitful ideas for later design
- Take into account thought leaders opinion
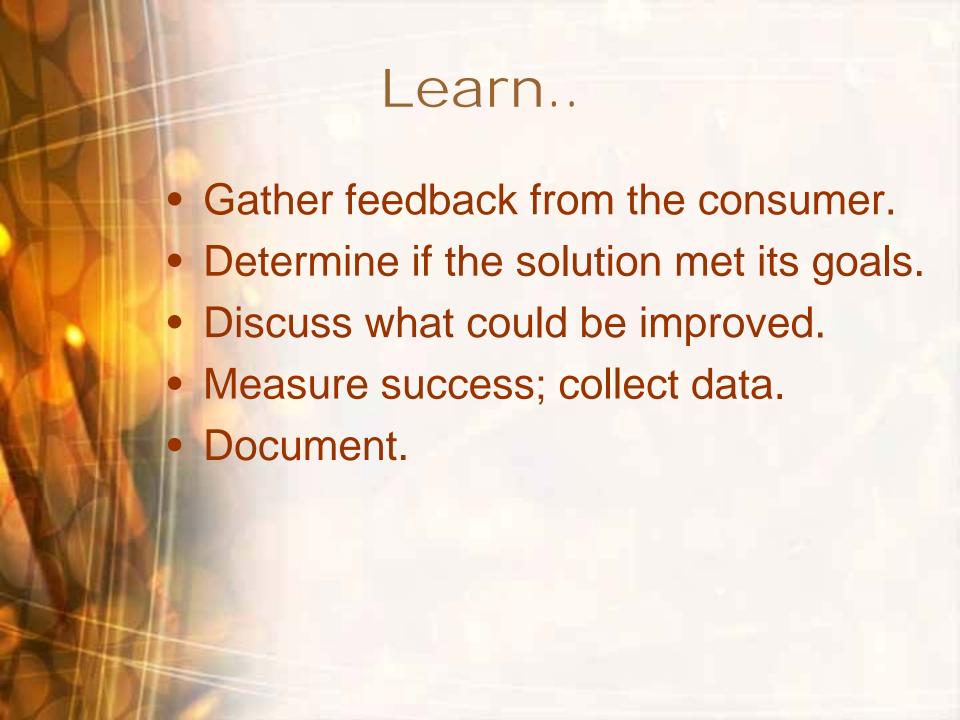
Ideate

- Identify the needs and motivations of your end-users.
- Generate as many ideas as possible to serve these identified needs
- Log your brainstorming session.
- Do not judge or debate ideas.
- During brainstorming, have one conversation at a time

Prototype..

- Combine, expand, and refine ideas.
- Create multiple drafts.
- Seek feedback from a diverse group of people, include your end users.
- Present a selection of ideas to the client.
- Reserve judgment and maintain neutrality.

Choose..

- Review the objective.
- Set aside emotion and ownership of ideas.
- Remember: the most practical solution isn't always the best.
- Select the powerful ideas.

Implement..

- Assign tasks.
- Execute.
- Deliver to client.

Learn..

- Gather feedback from the consumer.
- Determine if the solution met its goals.
- Discuss what could be improved.
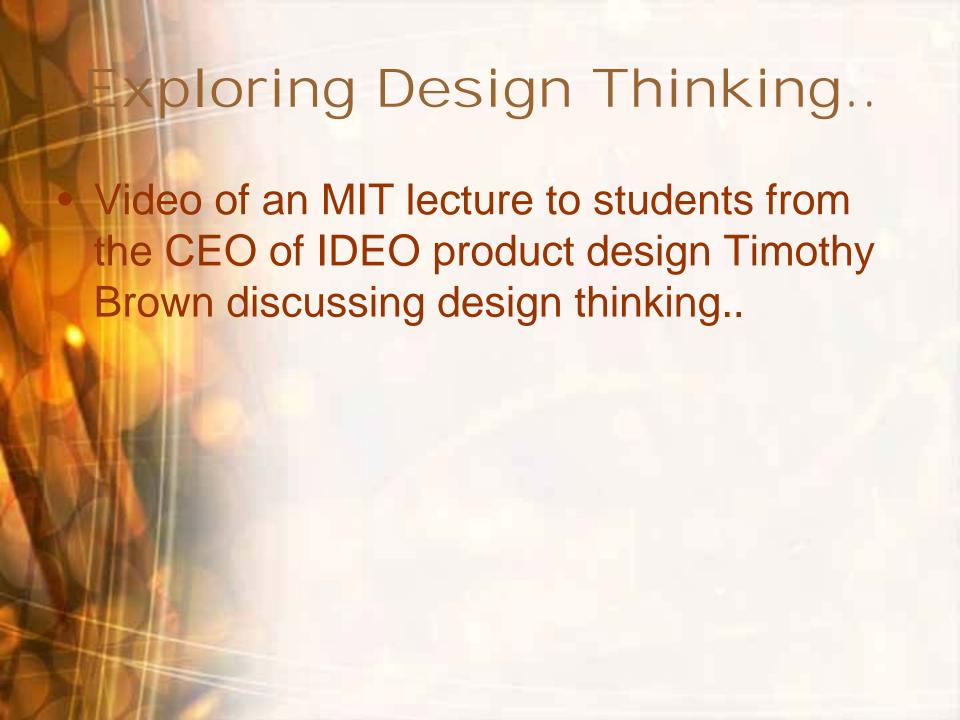- Measure success; collect data.
- Document.

Design Thinking

- The value of design is huge – we already know it contributes to:
- Better standard of life
- Adapting technologies for consumption
- Innovation and competitiveness
- Improving processes and performance.
- Better strategies
- Sustainability
- Why?!!
- Because designers use thinking to apply to a plethora of situations to solve problems.. Not just products but services, experiences, systems and organisations. This is your skill.

Exploring Design Thinking..

- Video of an MIT lecture to students from the CEO of IDEO product design Timothy Brown discussing design thinking..

For you to think about..

- The point about design thinking is that it is not a static or methodological 'academic' process.

- Its an evolving, dynamic and exciting way of exploring ideas, which you are doing now.. This is almost about being **aware** that you are doing this, and in essence thinking about thinking – how can you do it better?

Thinking about thinking..

- Brainstorming, Design Management, Human Factors, Market Research, User centred Design, Inclusive Design, User Experience, Problem Solving, Systems thinking, Sustainability, Culture etc. Are all ways of thinking.

- Reflective thinking is important to these processes.. Stop and rationalise, consider implications and ways forward!

Implications..

- Finally – A great presentation by Sir Ted Robinson – Discussing the importance of Creative Thinking for Education in a pretty comical way!