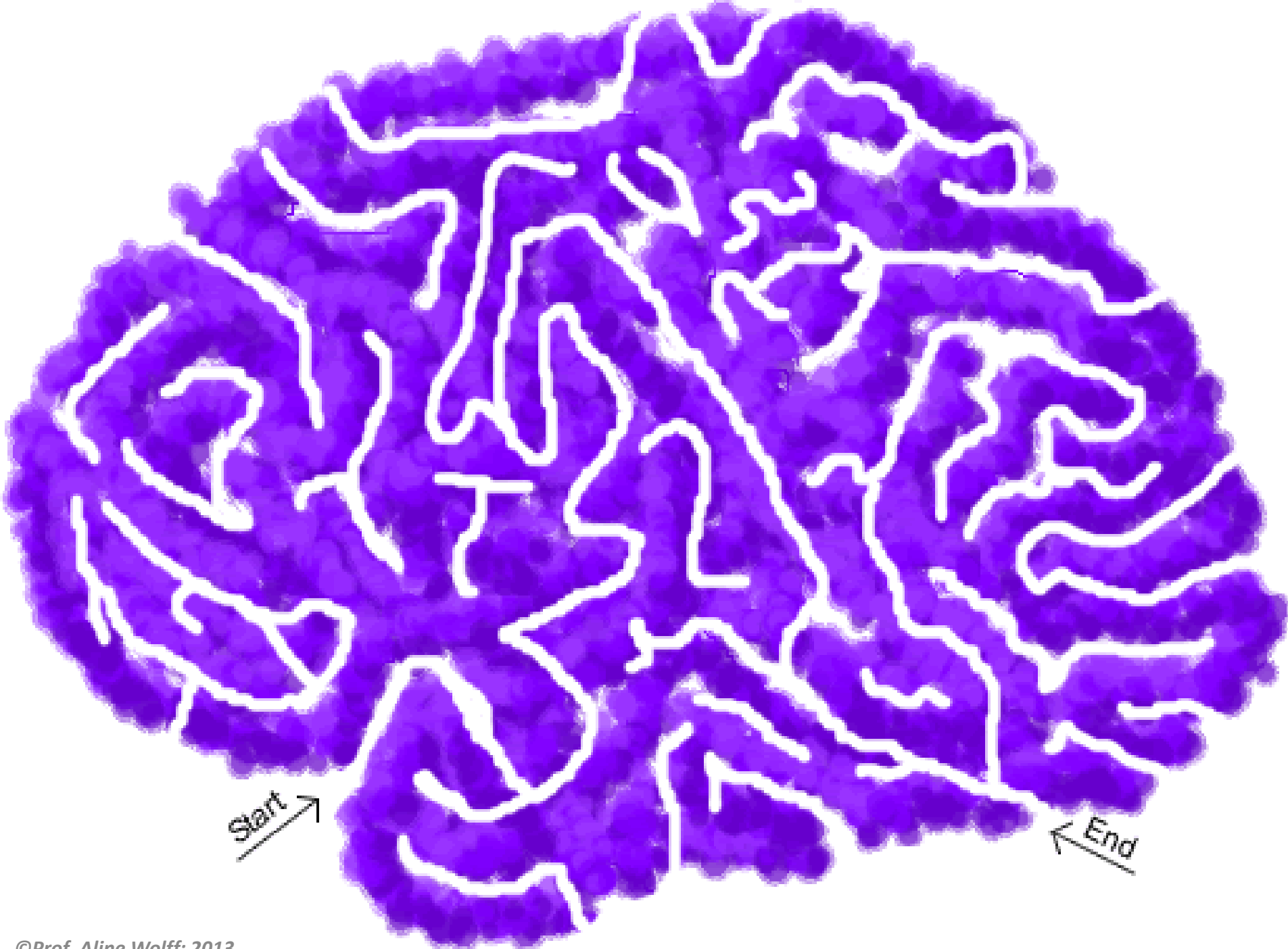


Seeing and Thinking Differently



Seeing and Thinking
Differently





Think
OrangeSM

Stop thinking in black and white.

How to approach innovative thinking

Challenge:

- Businesses need innovation – desperately!

But –

- Management styles and corporate culture *inhibit* innovative thinking
- Innovation myths *derail* thinking creatively
- Individual neurology makes innovative thinking *difficult and scary!*

So – is innovative thinking possible? *Yes!*



what if?

How do you develop a new idea?

- 1) **Examine assumptions** that you make unconsciously all the time
- 2) Learn more about **where ideas come from**
- 3) Experience how **rapid prototyping** can expand your ideas

Let's get started!



What's an indispensable kitchen tool?

Kitchen utensils:

- Espresso machine
- Frying pan
- Spoon
- Spatula
- Cutting board
- Chef's knife



Exercise 1: Kitten in a tree



Using the six kitchen tools we identified, develop a plan to get that kitten down from the tree!



How did you 'solve' this?

- **What assumptions did you make?**
- **What constraints limited your thinking?**
- **How could you approach the exercise with more innovative thinking?**



Apply this to your business idea

What are your assumptions about ...

- The **need** for your idea?
- Who are your possible **customers**?
- What is the **value** of product or service?
- How does your idea **improve or differentiate** from existing products or services?





<http://www.thegrommet.com/>



How do we start *thinking innovatively*?
with Ideation?
with Creativity?
with Invention ?
with Innovation?



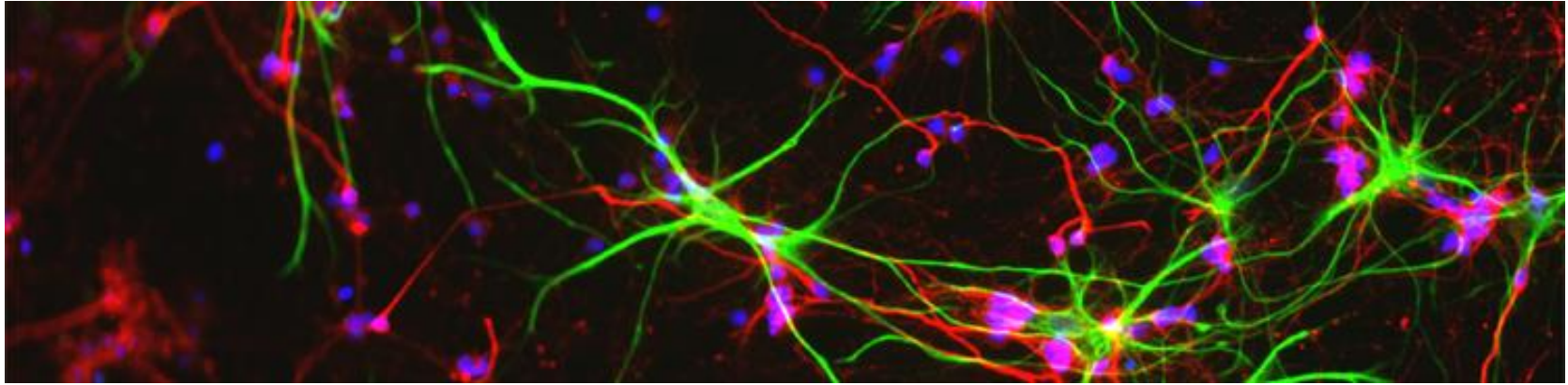


**We agree about the need to innovate
– but how do we do it?**

Neuroscience: the study of the brain: adds enormously to what we know about thinking innovatively

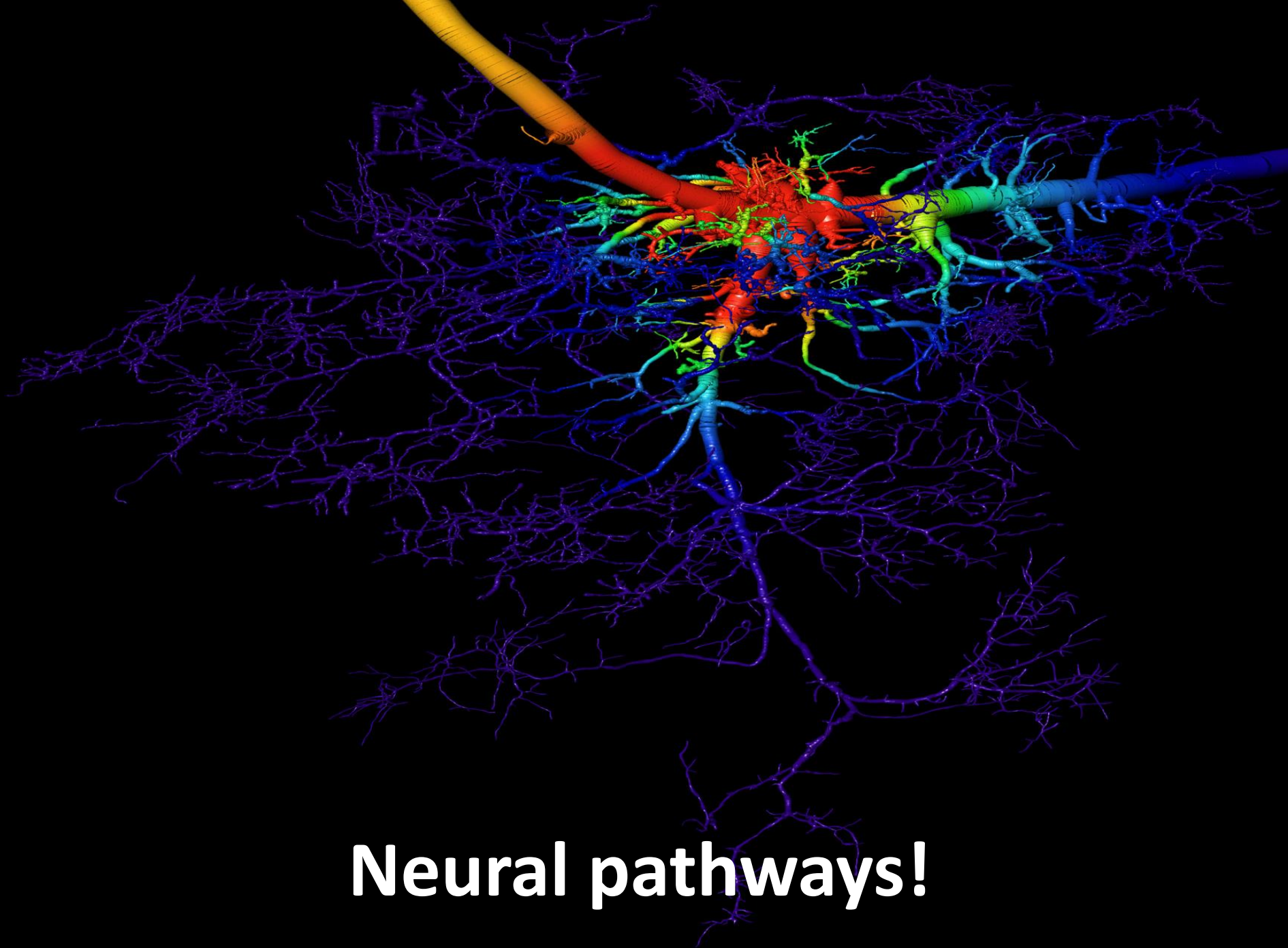


Brain plasticity → new ideas



The brain never stops changing and adjusting!

Our experiences reorganize *neural pathways* in the brain. Long lasting functional changes in the brain occur when we learn new things or memorize new information. These *changes in neural connections* are called *neuroplasticity*.

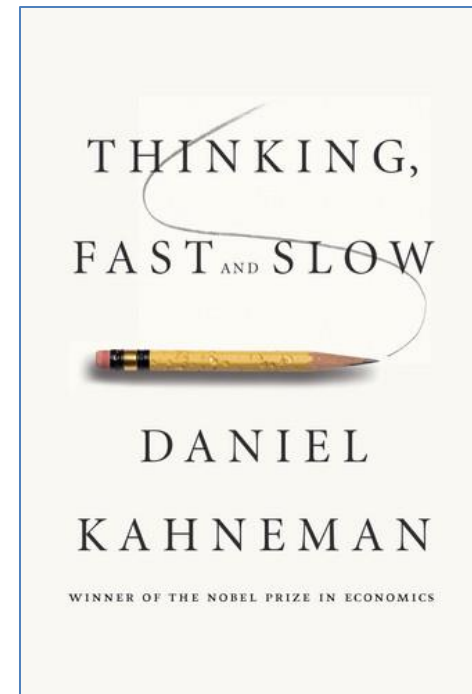
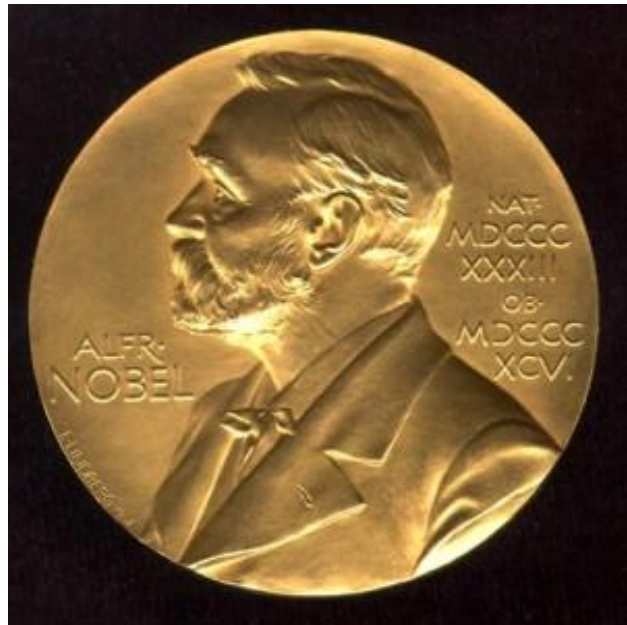


Neural pathways!

How does the brain process information?

**It associates new information from experiences
with existing patterns or thoughts**

**Rather than creating new patterns for each
new experience**

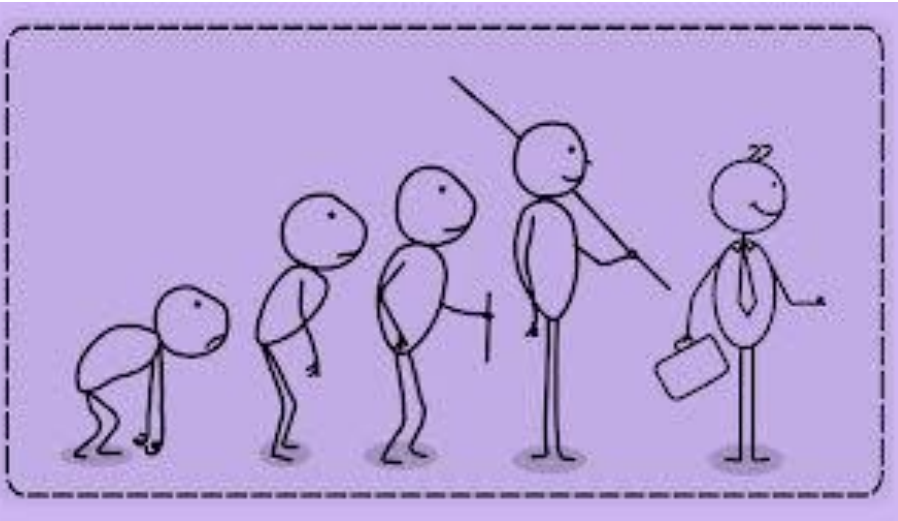


But neural pathways can block new ideas

The brain tends to:

- Rely on general rules
- Tilt towards protecting us from danger
- Work in the environment in which we evolved

Which is quite different from our current one!



So - innovative thinkers ...

Need to change their thinking patterns
by

- ***Connecting*** their ideas with something that is ***not related***
- Using ***juxtapositions*** to see new relationships
- Creating ***new sets of mental patterns***

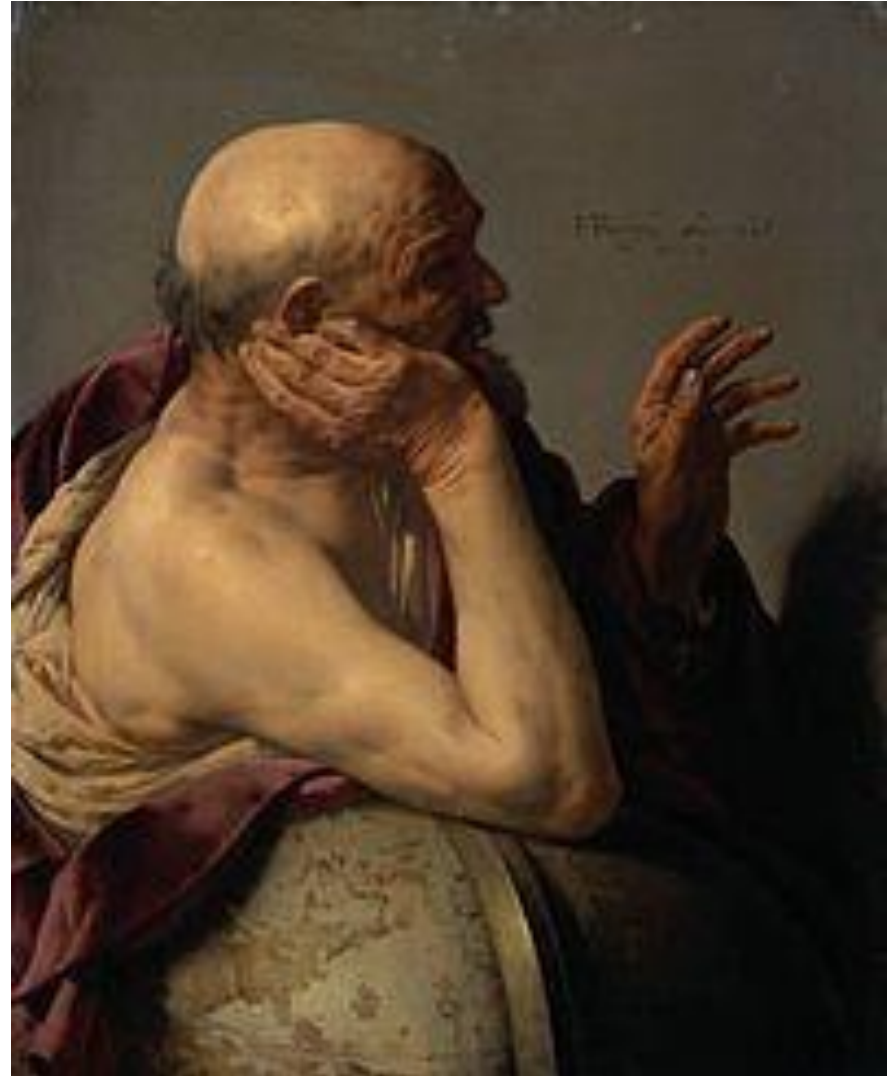
Michael Michalko, What I Learned About
Creative Thinking from Leonardo da Vinci



Innovative thinkers ... are inspired!

“If you do not expect the unexpected, you will not find it, for it is not to be reached by search or trail.”

Heraclitus, c. 500 BC



What is inspiring?

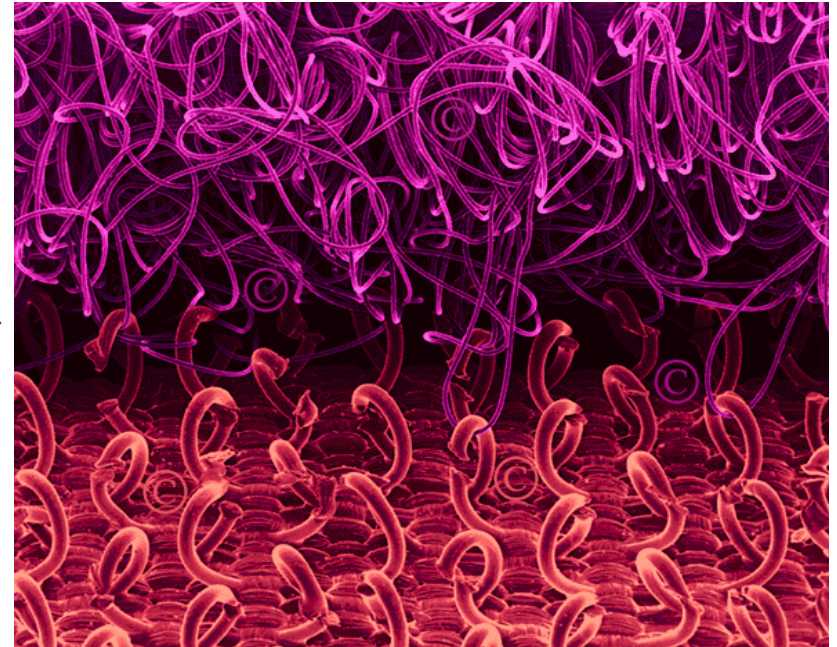
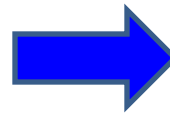


Peter Drucker –

The important and difficult job is never to find the right answers – it is to find the right questions!

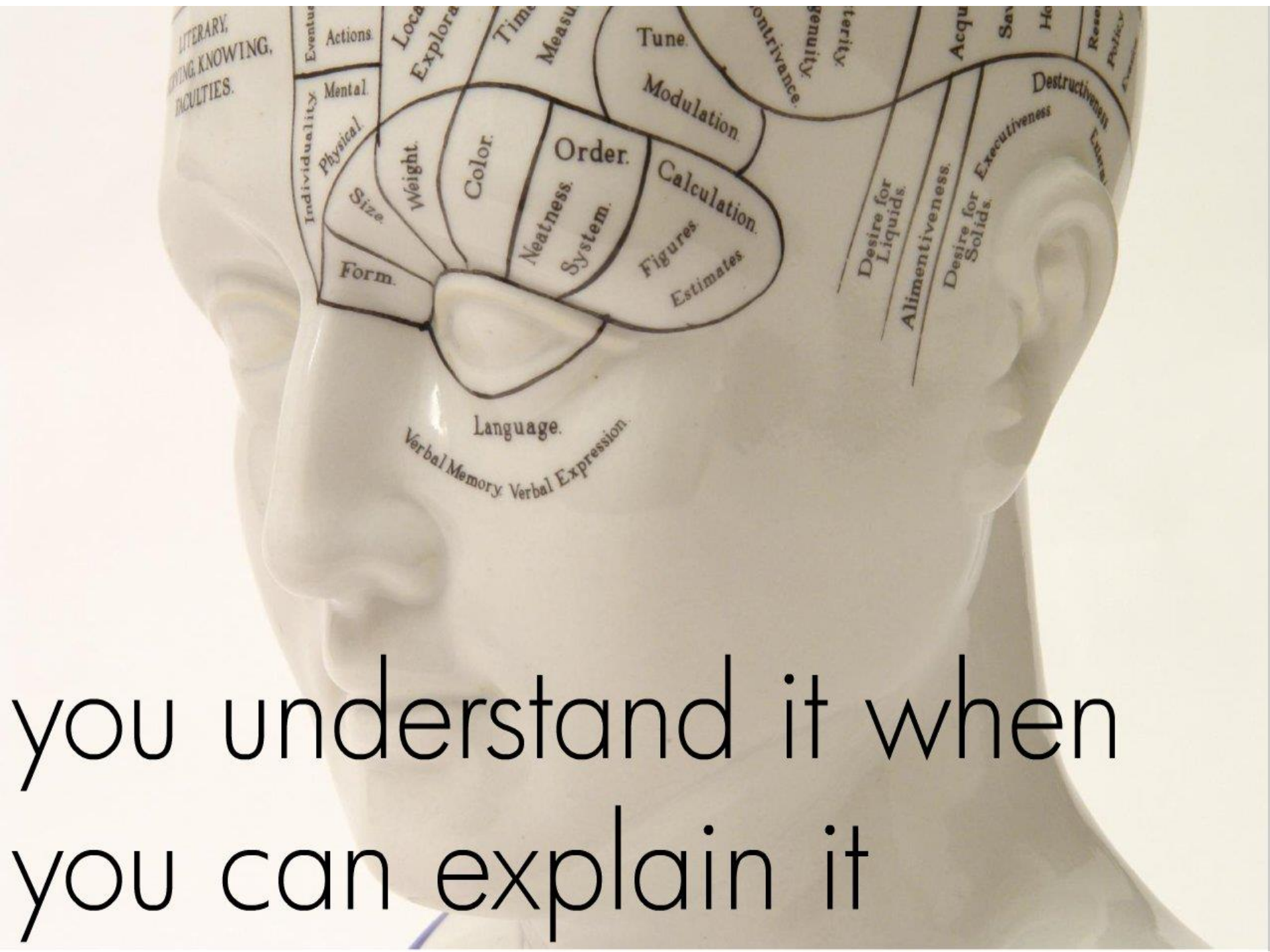


Georges de Mestral: velcro!



- <http://mentalfloss.com/article/18629/velcro-humble-origins-greatest-thing-ever-happen-my-sneakers>





you understand it when
you can explain it

What is rapid prototyping?

Technically, it's a modeling process used in for product design where:

- A CAD drawing may be used
- A part is built by depositing layer (slices) upon layer of material
- And rapid prototyping includes 3D copying, stereolithography, selective laser sintering, or fused deposition modeling – and all kinds of complex advanced and expensive technology ...



Why should we do rapid prototyping?

- Construct a **potential solution**
- **Try** out a specific concept
- **Assess** possible ways to meet proposed requirements
- Look at aspects, functions, steps, criteria, processes
- Use a **free-to-fail** environment
- Encourage ***thinking out of bounds!***

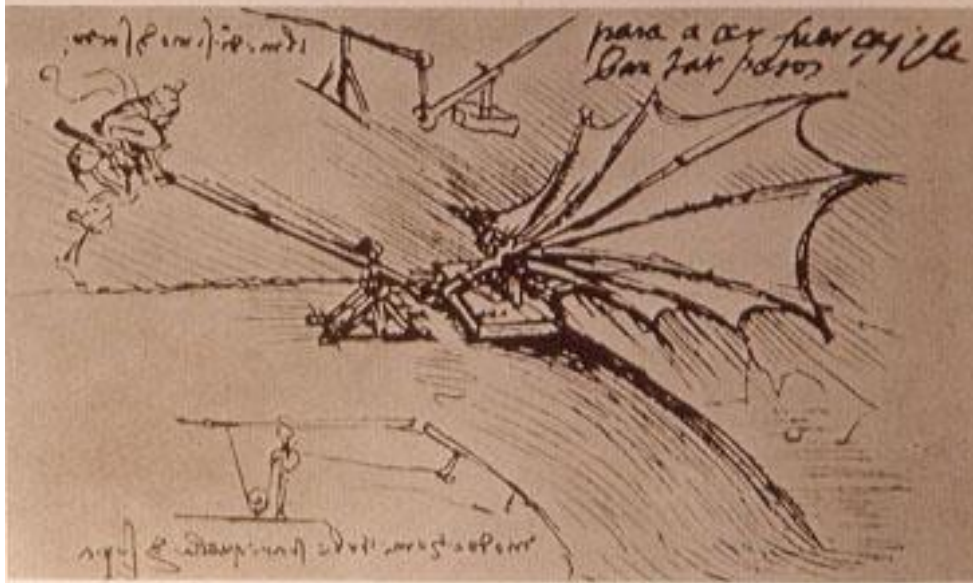
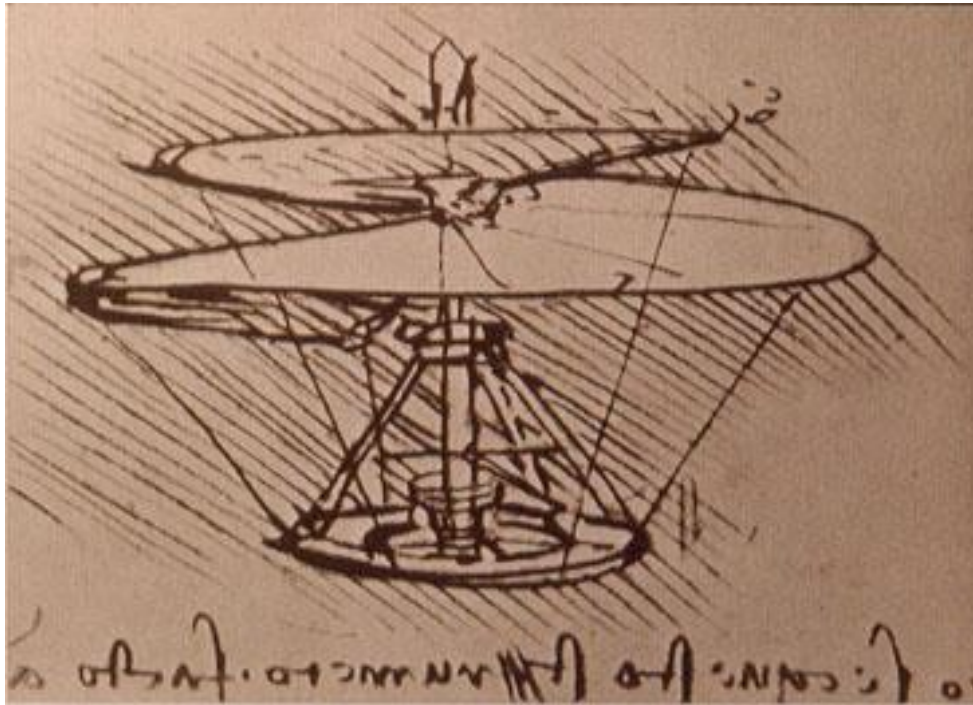


Rapid prototyping: showing, not telling



Using quick, disposable materials

**Leonardo da Vinci,
creative genius:
How did he
prototype new
ideas?**

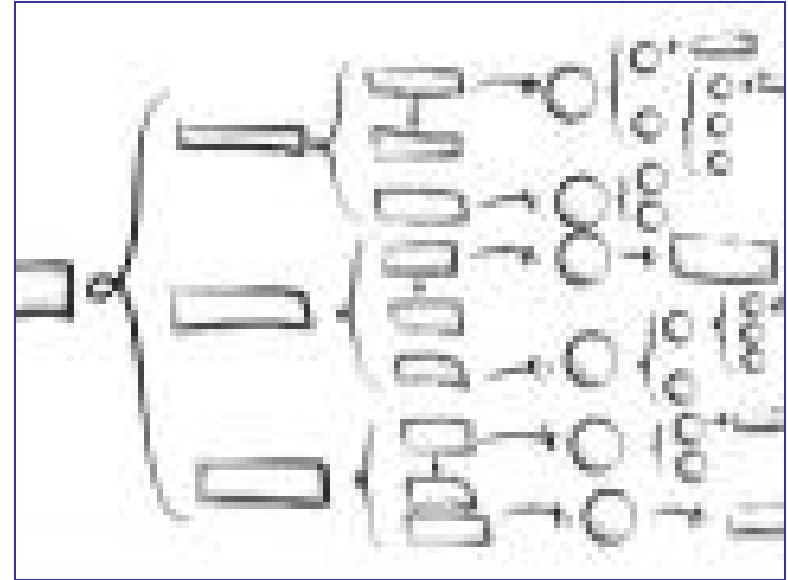


**Drawing,
Designing,
& Building
Models**

Think with your fingers!



Prototyping: drawing on paper



Create JSP for the page

Name:

Number:

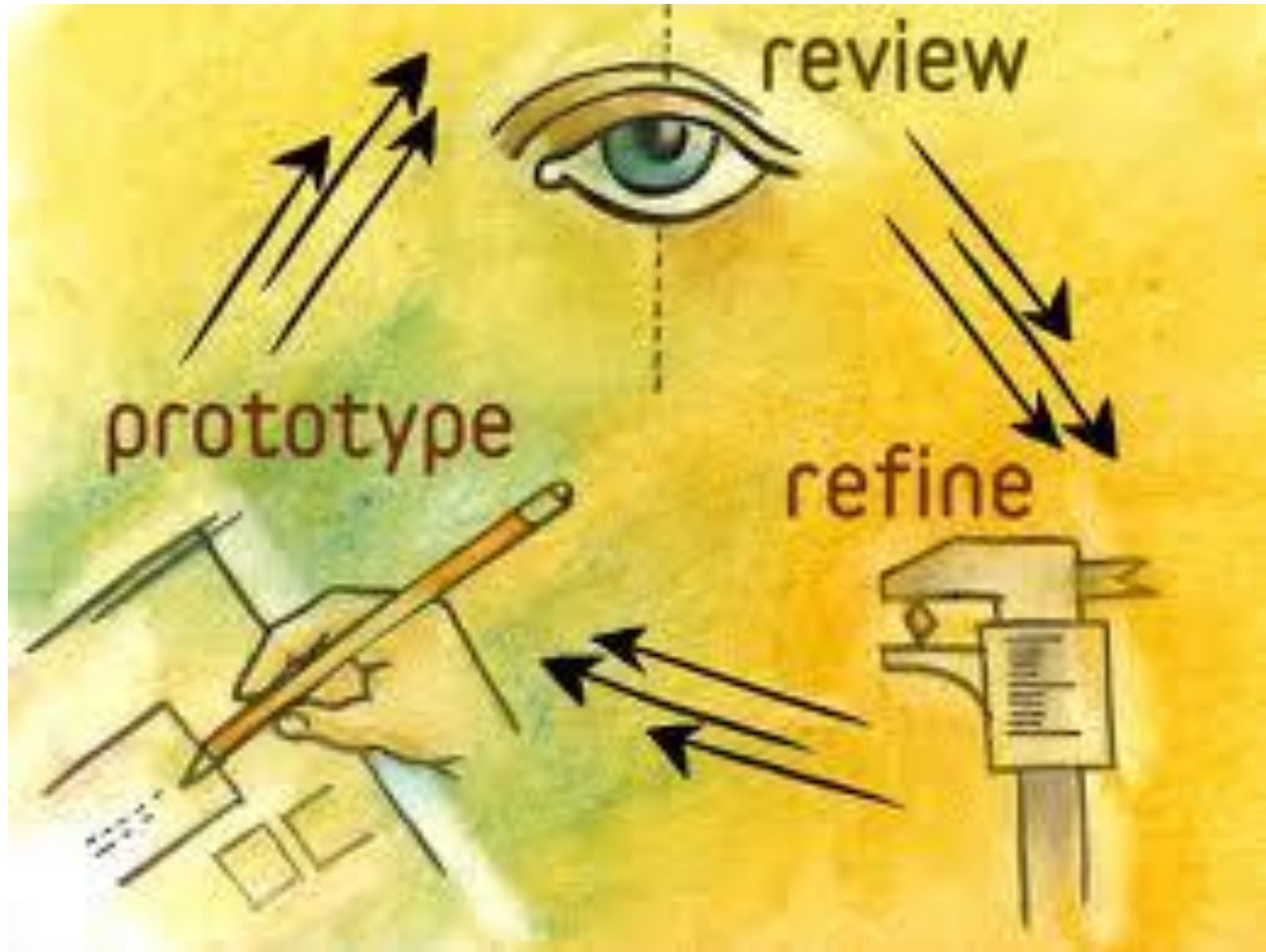
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Price Range: to

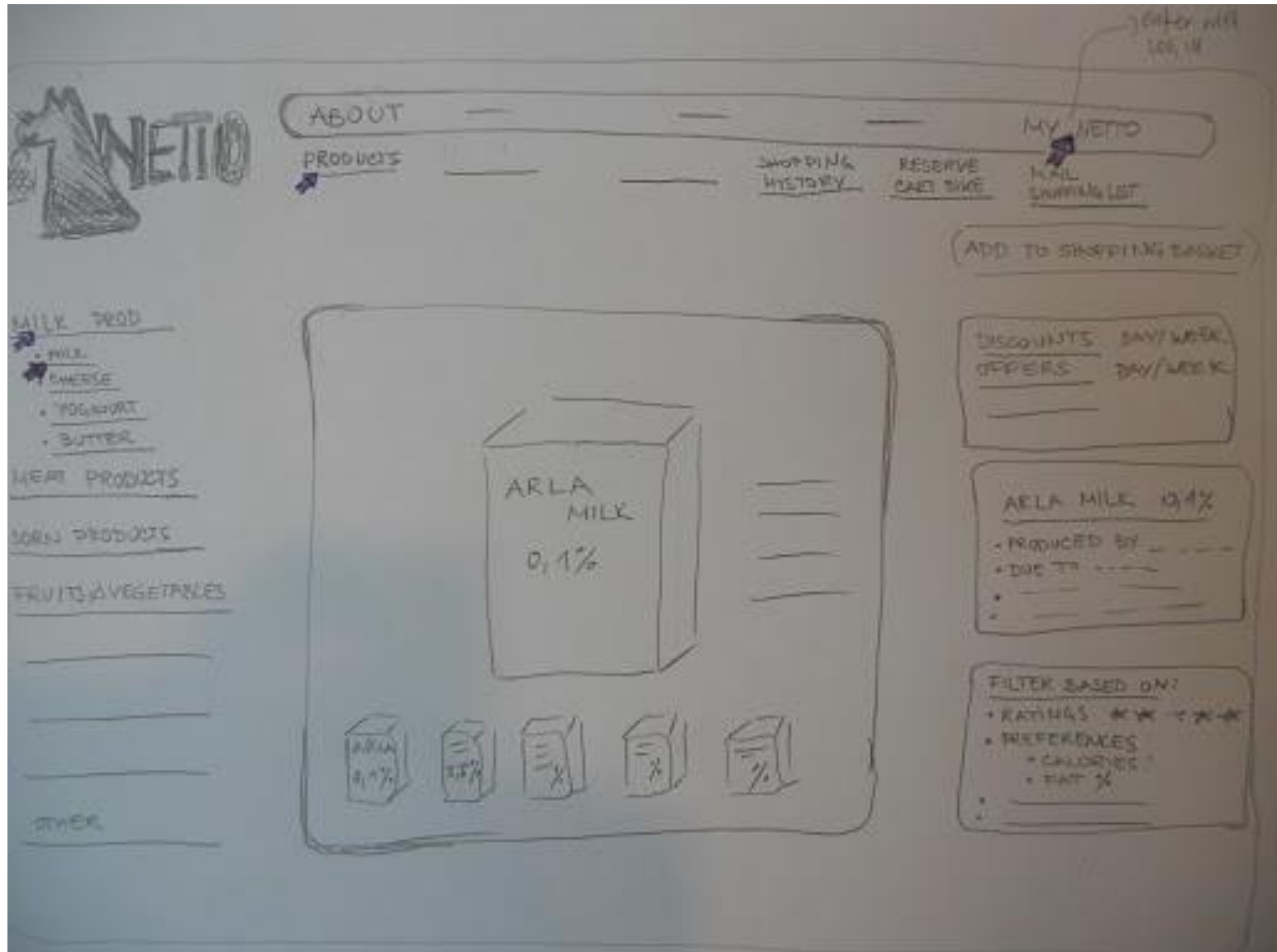
Rapid prototyping: paper model



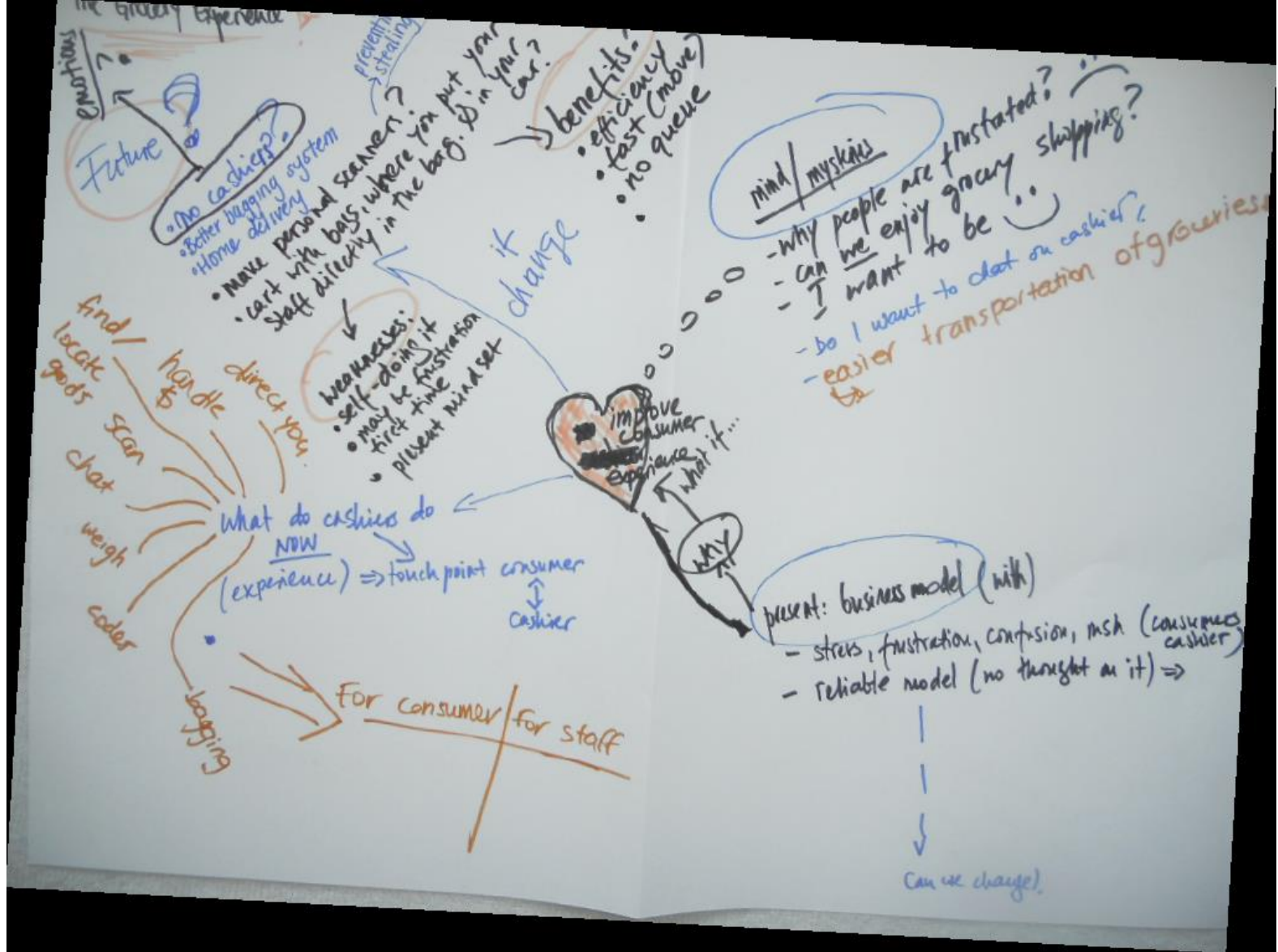
Three steps from prototype to project



Start with a mind map or sketch



Add ideas, possibilities, more than you need



How do you get started?



- Consider a **mystery** rather than a **problem**:
- What is the mystery at the heart of your idea?
 - A new product or service?
 - A need that isn't being filled?
- What if you tried



What are we going to do?

- **2 teams per table -**
Each table has flip chart paper, markers, construction paper, tape or glue, scissors, pipe cleaners, clay, and some random items.
- **You could start by drawing a plan or diagram - even a mind-map**
- **While you create your models, we'll circulate, ask questions, take pictures, give advice, answer questions.**
- **Whenever lunch is available, bring lunch to table, eat and apply finishing touches. Take pictures to preserve your thinking.**

1:00 - back in auditorium. Six selected teams will present their projects.

How could you expand/improve your plans?

- Use 3-D prototyping to explain your ideas
- Visualization - ties to creative marketing
- Customer focus / different steps
- What are the most important features – where should we focus?
- Articulate the plan – visualize to think more clearly about it
- Consider resource management
- Having fun: an integral part of learning (AW)

Innovative thinkers ...

I roamed the countryside
searching for the answers to
things I did not understand:
why shells existed on the tops
of mountains ...

why thunder lasts a longer
time than that which causes
it...

These questions and other
strange phenomena engaged
my thought throughout my
life.



