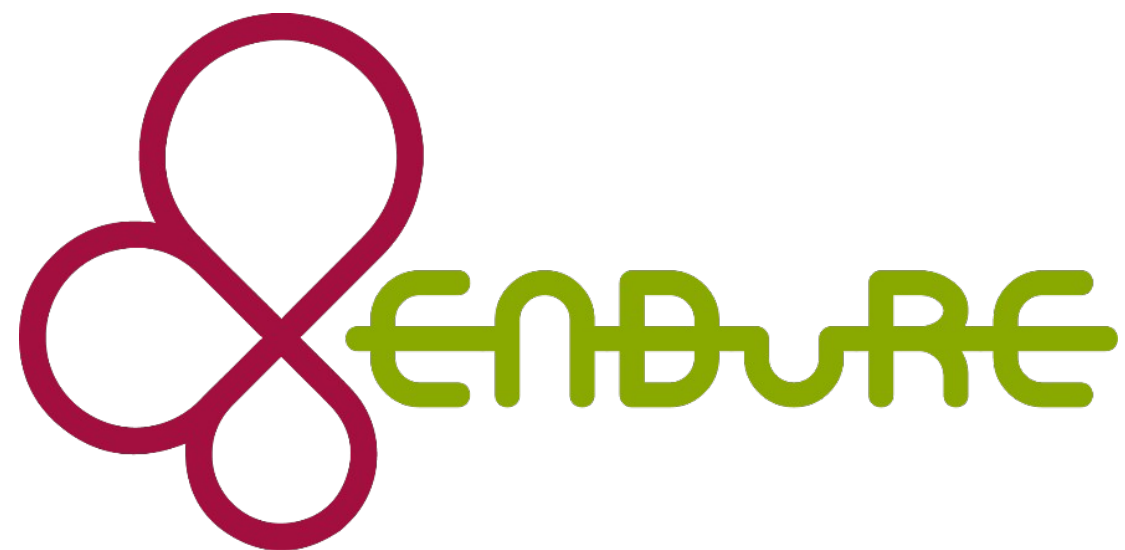




Pretotype it

Make sure you are building THE RIGHT it, before you build IT right!

Leonardo Zangrando
PretotypeCo.



UNIVERSITY OF
SURREY



UNIVERSITÀ DI PISA



IVERIDIS
INTELLIGENT INNOVATION



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Erasmus+ Programme
of the European Union

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Pretotype it

Make sure you are building THE RIGHT it, before you build IT right!

Leonardo Zangrando & Alberto Savoia

PretotypeCo., Google, Stanford University

ENDuRE, Università di Pisa, 1st June 2016

London

your speaker
Leonardo Zangrando

1999 - Sales Organizations Effectiveness Consulting & Training

global customers: Novartis, Roche, Lundbeck, Nycomed, ...

2010 - Innovation & Startup

customers: Intesa bank, AREA Science Park, business schools, ...

2012 - Prototyping

customers: Google EMEA, FremantleMedia, ...

The Law of Failure

Alberto's Recent Experience

1999-2001

Founded Startup 1
\$3M Series A
+18mo: \$100M acquisition

1999-2001

Founded Startup 1
\$3M Series A
+18mo: \$100M acquisition

Hey, this is easy!

2001-2002

Joined Google as Eng Director
..., launched AdWords, ...

Software Development Jolt Award (2005, 2006, 2007, 2008)
InfoWorld Technology of the Year Award (2005, 2006)
Wall Street Journal Technology Innovation Award (2005)
InfoWorld Top 25 CTOs Award (2005)
Sun's Duke Award for most innovative Java technology (2005)
eWeek Annual Excellent Awards (2005)
Network Computing Editor's Choice Award (2001)
Software Development Magazine Productivity Award (1998)
Java Developer's Journal World Class Award (1998)
JavaWorld's Editor's Choice Award (1997)

...



2001-2002

Joined Google as Eng Director
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Software Development Jolt Award (2005, 2006, 2007, 2008)
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eWeek Annual Excellent Awards (2005)
Network Computing Editor's Choice Award (2001)
Software Development Magazine Productivity Award (1998)
Java Developer's Journal World Class Award (1998)
JavaWorld's Editor's Choice Award (1997)
...

Hey, I'm good!



2002-2008

Founded Startup 2
\$25M Series A, B, C
+5 years: ~\$0

2002-2008

Founded Startup 2
\$25M Series A, B, C
+5 years: ~\$0

WTF??.

Founded Startup 2
\$25M Series A, B, C
+5 years: ~\$0

Why The Failure ??

2008-2012

Back to



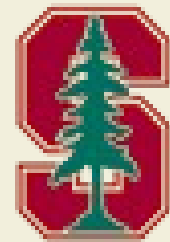
Innovation Agitator, Engineering Director

Student of New Product Failure

since 2012

*Prototype***Labs**

Google



STANFORD
UNIVERSITY

the Law of Failure

Most New Ideas Fail

the Law of Failure

~90% of all mobile apps don't make money

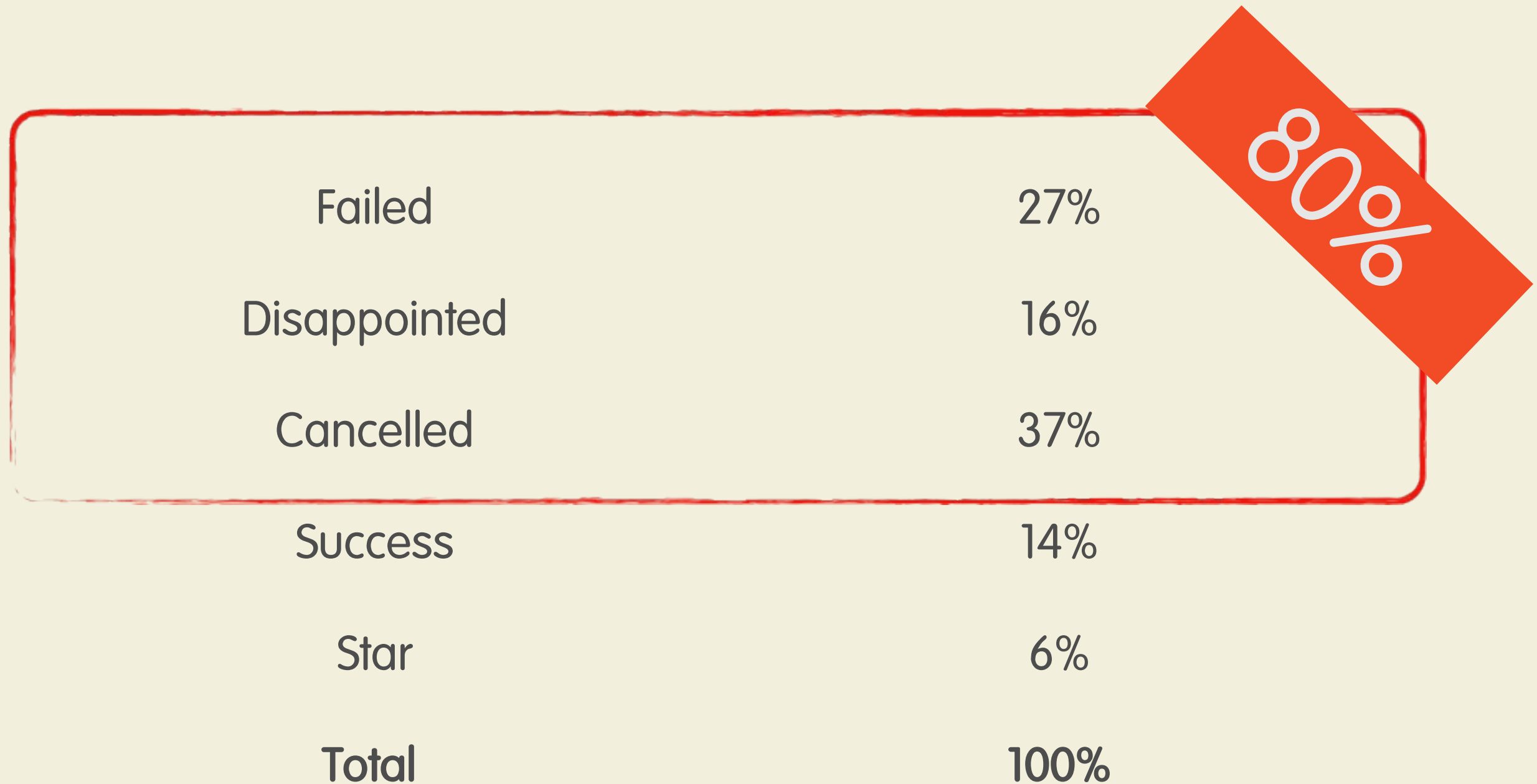
~80% of new products fail in the market

4 out of 5 startups lose investor money

....

For truly innovative ideas
the odds are even worse

One year:
24,543 new products*



* Nielsen

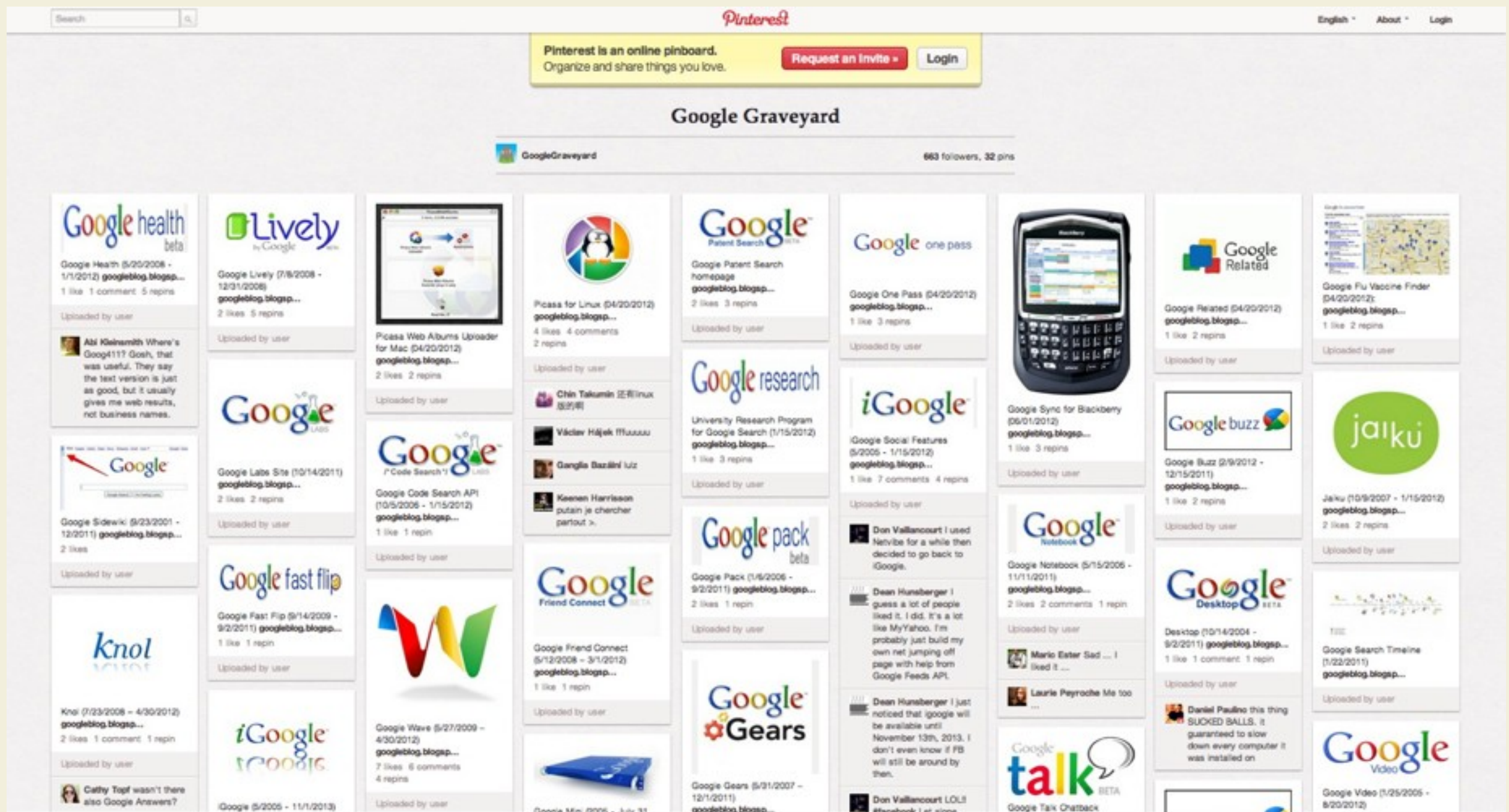
ENDuRE - Leonardo Zangrando - Pretotype Company Ltd.

Copyright (c) 2015 PretotypeCo.

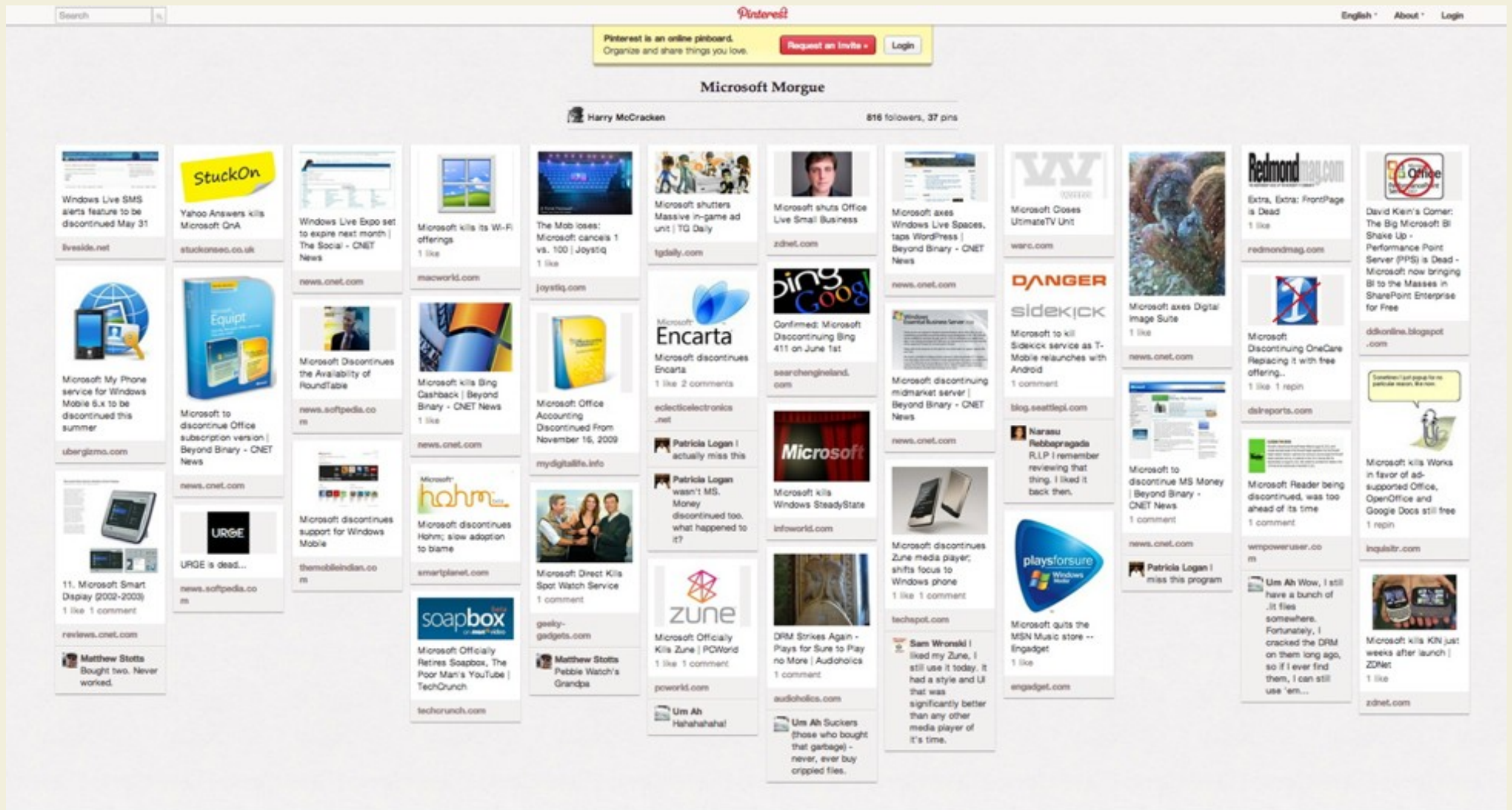
Most New Ideas Fail

Most New Ideas Fail
even if they are very well executed

It happens to the best



...to the biggest



... to brilliant inventors and VCs



Dean Kamen
Successful Inventor

(e.g. medical devices
for dialysis and drug
infusion)

John Doerr
Kleiner Perkins VC



... to brilliant inventors and VCs



Dean Kamen
Successful Inventor

John Doerr
Kleiner Perkins VC

the Segway



CC-by-sa Wayne Camlin

it even happened to ...

it even happened to ...



HIM

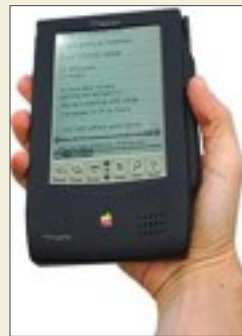
it even happened to ...



HIM



LISA personal computer



NEWTON palm computer



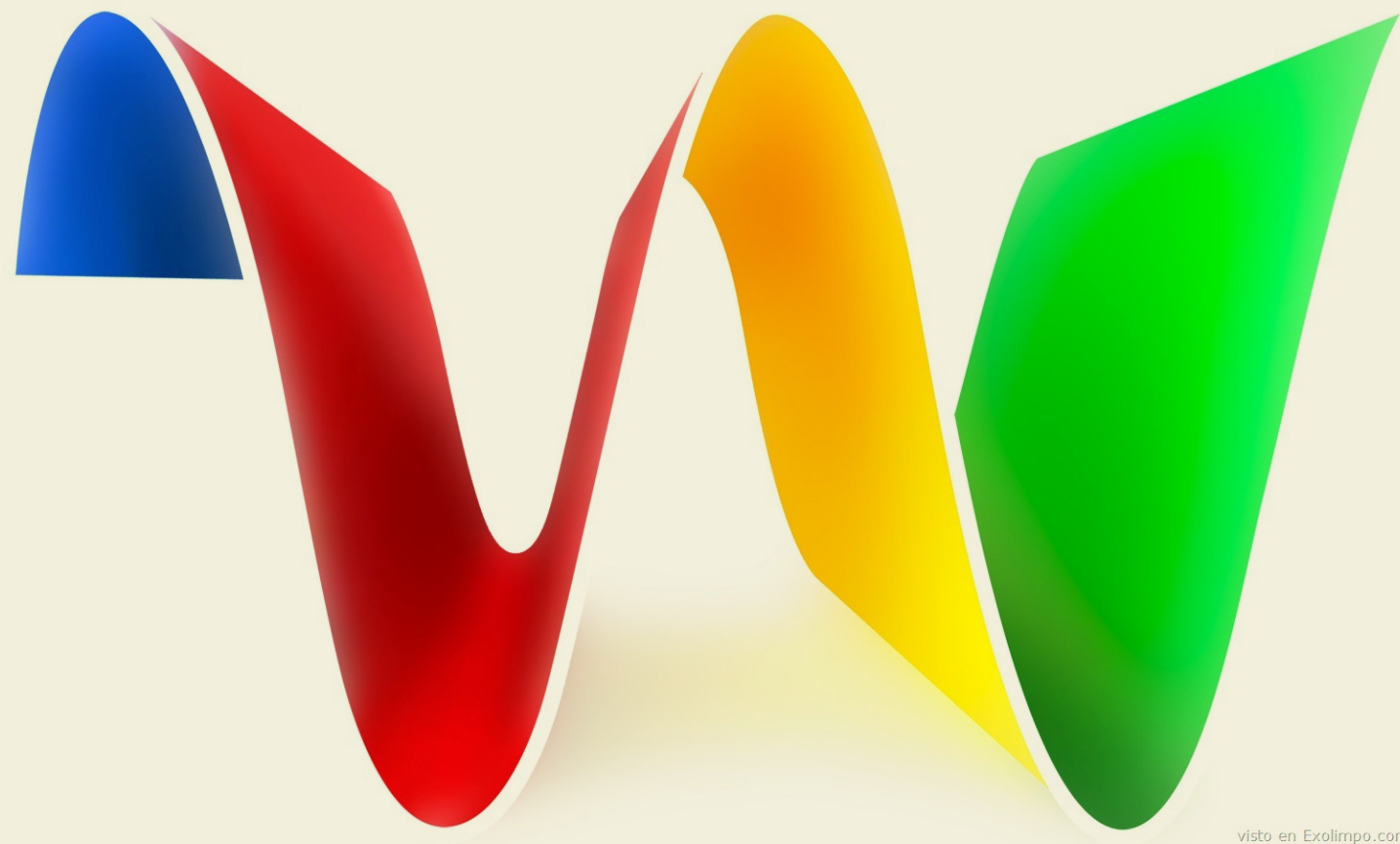
Macintosh TV

OUCH !

Pretotyping to the Rescue!

Failure in
Launch
Operations or
Premises

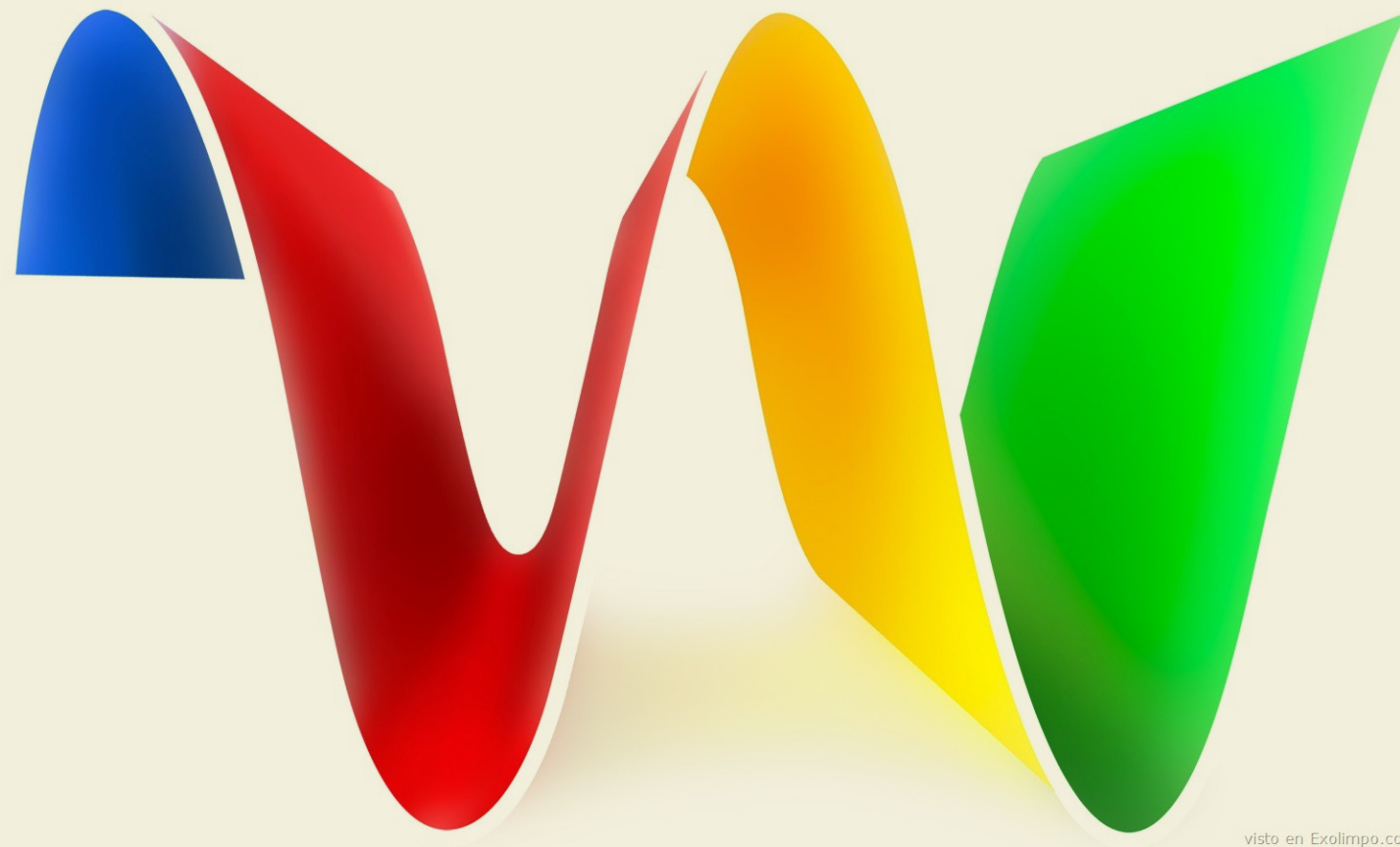
HIT or FLOP ?



visto en Exolimp.com

HIT or FLOP ?

Launch 👍



Operations 👍

HIT or FLOP ?

Premises ?

Make Sure You Are Building
THE RIGHT it
Before You Build IT Right

- Idea on the Table
- Innovative Technology
- Innovation to Test
- not necessarily I.T.

How Do I Know I Have The Right “IT” ?

How Do I Know
I Have The Right “IT” ?

Don't Ask

How Do I Know
I Have The Right “IT” ?

Don't Ask
Literally



Ideas
+
Opinions
=
Trouble

MY 5¢

IDEA

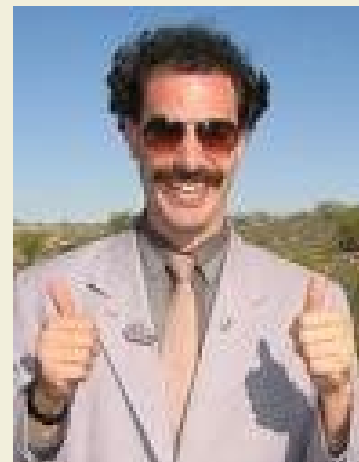
Thoughtland
pop. ∞

OPINION

I LOVE IT !

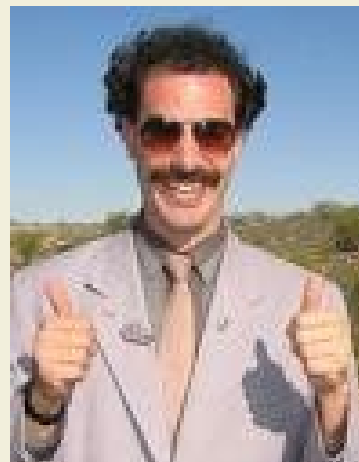
Thoughtland,
where every idea can..

... be a WINNER !



Thoughtland, where every idea can..

... be a **WINNER**!
False Positive



Thoughtland, where every idea can..

... be a LOSER !



Thoughtland, where every idea can..

... be a LOSER!

False Negative



?????



Get Out of Thoughtland

A. S. A. P.

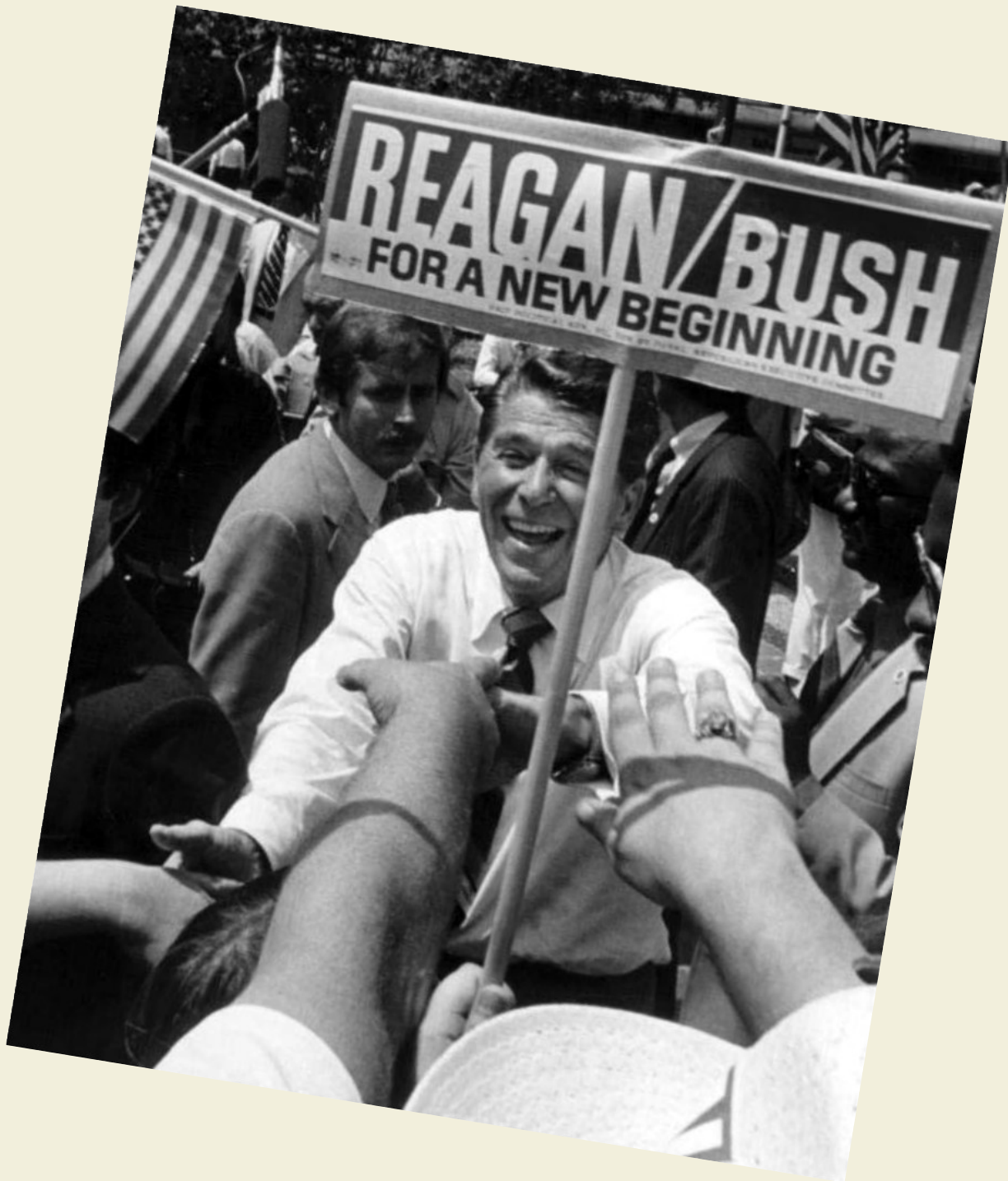
Get Out of Thoughtland

A. S. A. P.

Opinions	👍	Data
Questions	👍	Actions
Ideas	👍	Pretotypes

What the Heck is a Pretotype ?

Back to the Eighties



Back to the Eighties



Problem:
Managers
Need Typists
to Write Letters

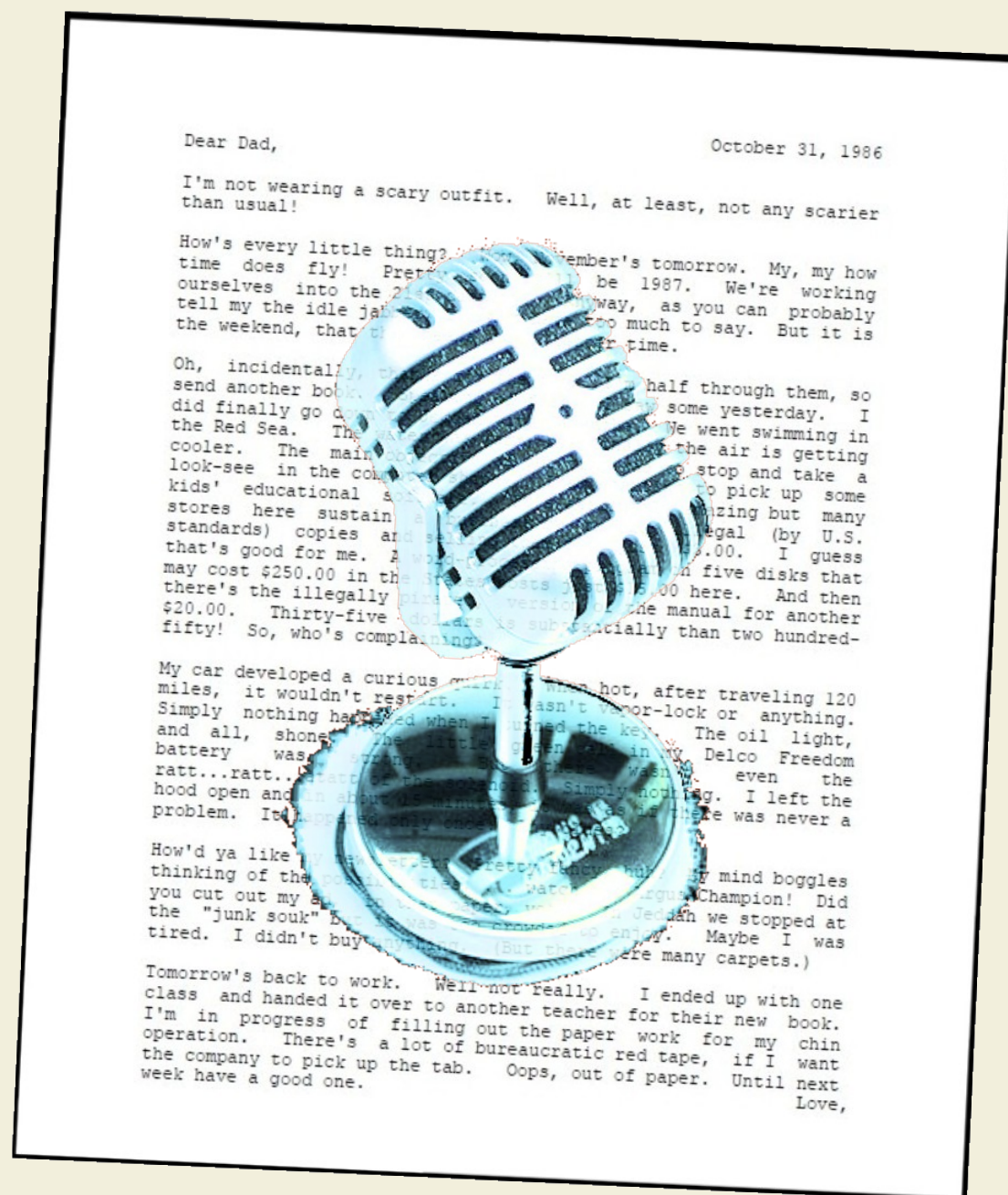
Back to the Eighties

IBM =
Typewriters
& Mainframes



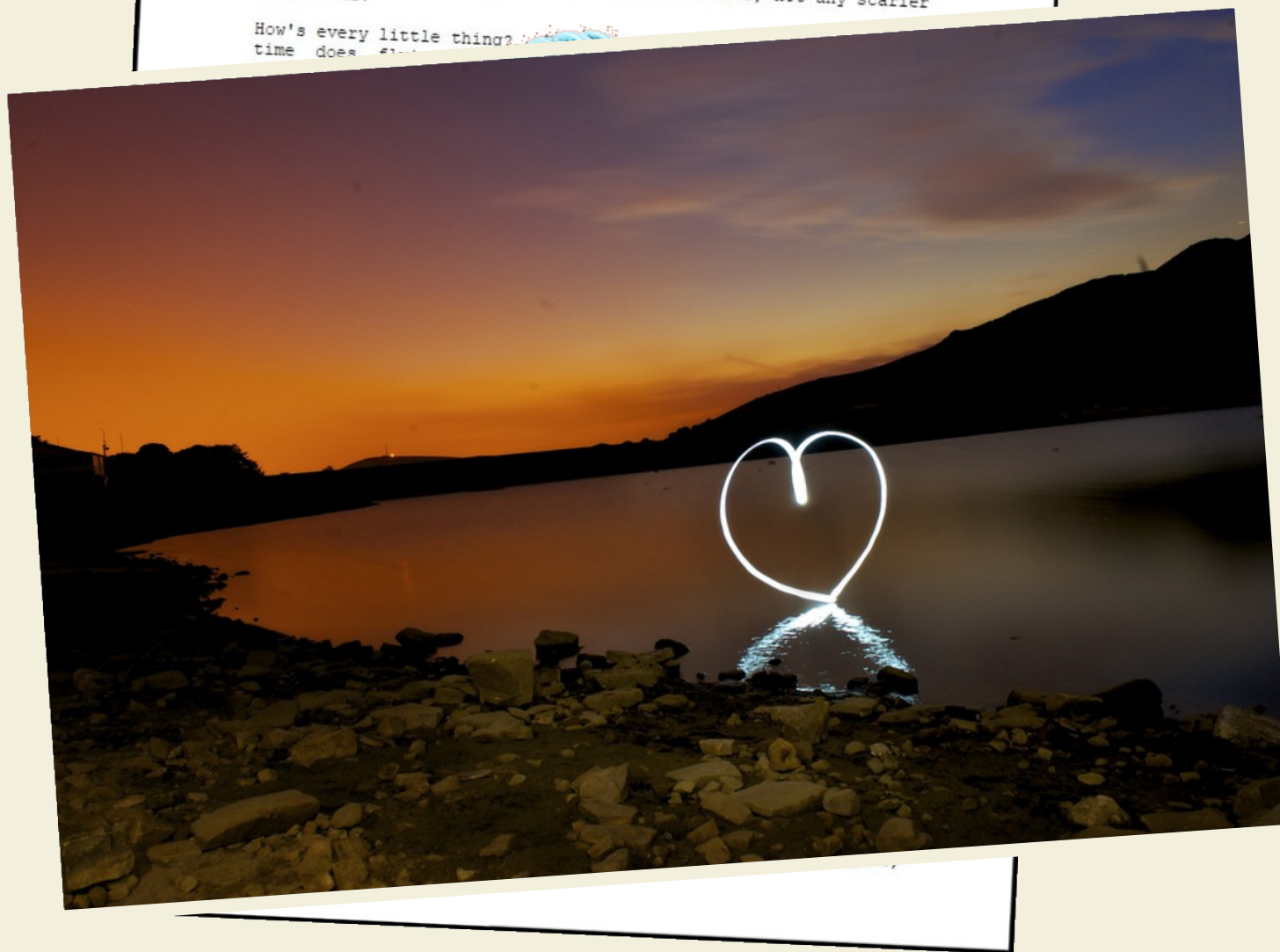
the Challenge

What if...
we Built a
Speech-to-Text
Machine?



the Challenge

Dear Dad, October 31, 1986
I'm not wearing a scary outfit. Well, at least, not any scarier
than usual!
How's every little thing? 
time does 



We can
make it work and
Customers told us
they'd love it !



Hold on !
Are we sure?
Let's run an
experiment first

the Sage

Let's build
a “machine”
that works



the Sage



and have
Customers use it

the Experiment



the Experiment



Pretend-o-type
Pretotype

Just Ask, Really?

“We love the idea
of speech-to-text
and we’ll pay
big \$ for it
if you can built it right.”

Before the Pretotype



Just Ask, Really?

“We love the idea
of speech-to-text
and we’ll pay
big \$ for it
if you can built it right.”

Before the Pretotype

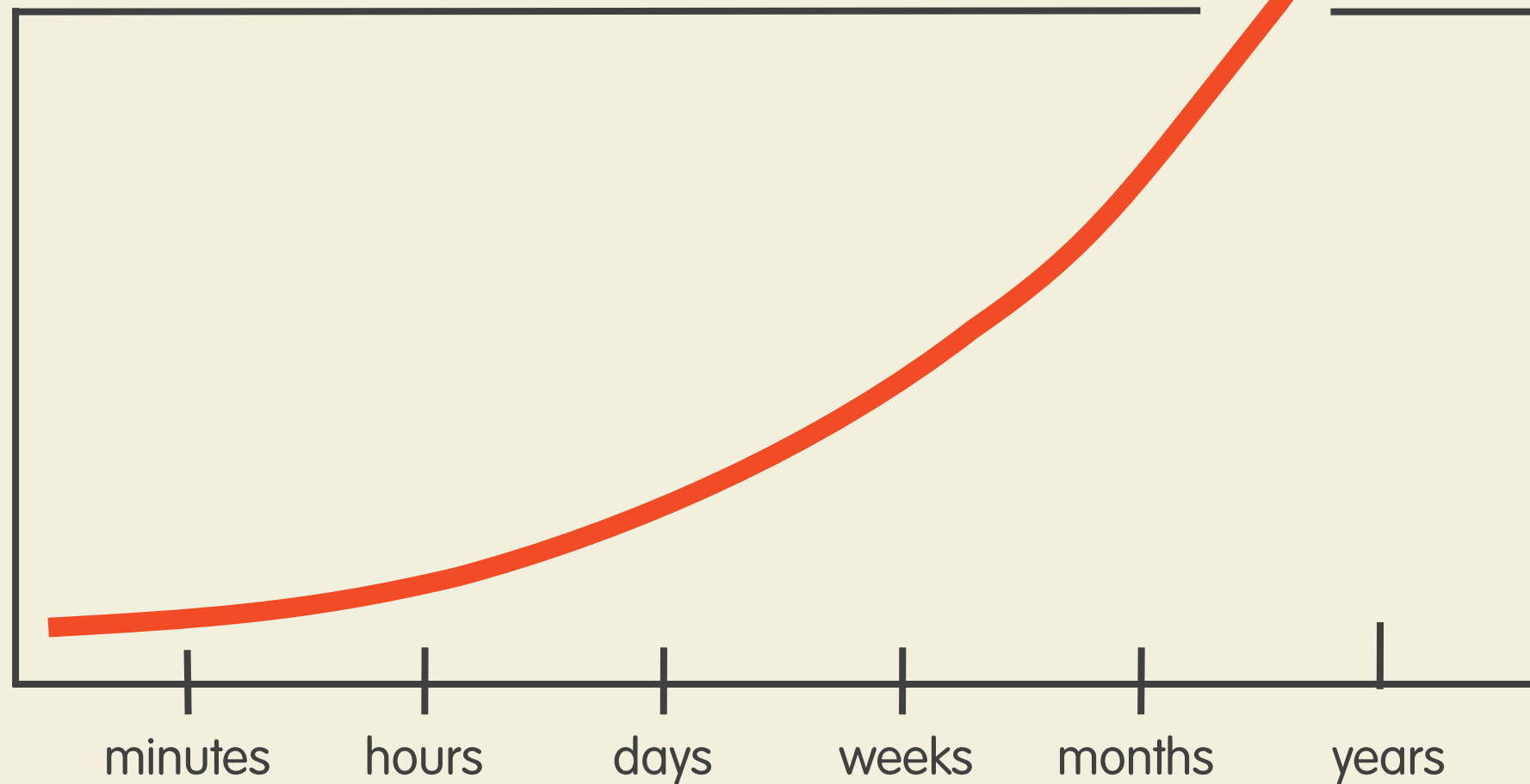


After the Pretotype



Fail Fast

Compulsion
to keep going
at all costs



Time Invested

the Original Palm “pre”



Pretotyping vs. Prototyping

Pretotyping

Investment: hours, days

Main Q: Would we use it?

Deliverable: [Working] pretotype



Prototyping

Investment: days, weeks

Main Q: Can we build it?

Deliverable: Working prototype

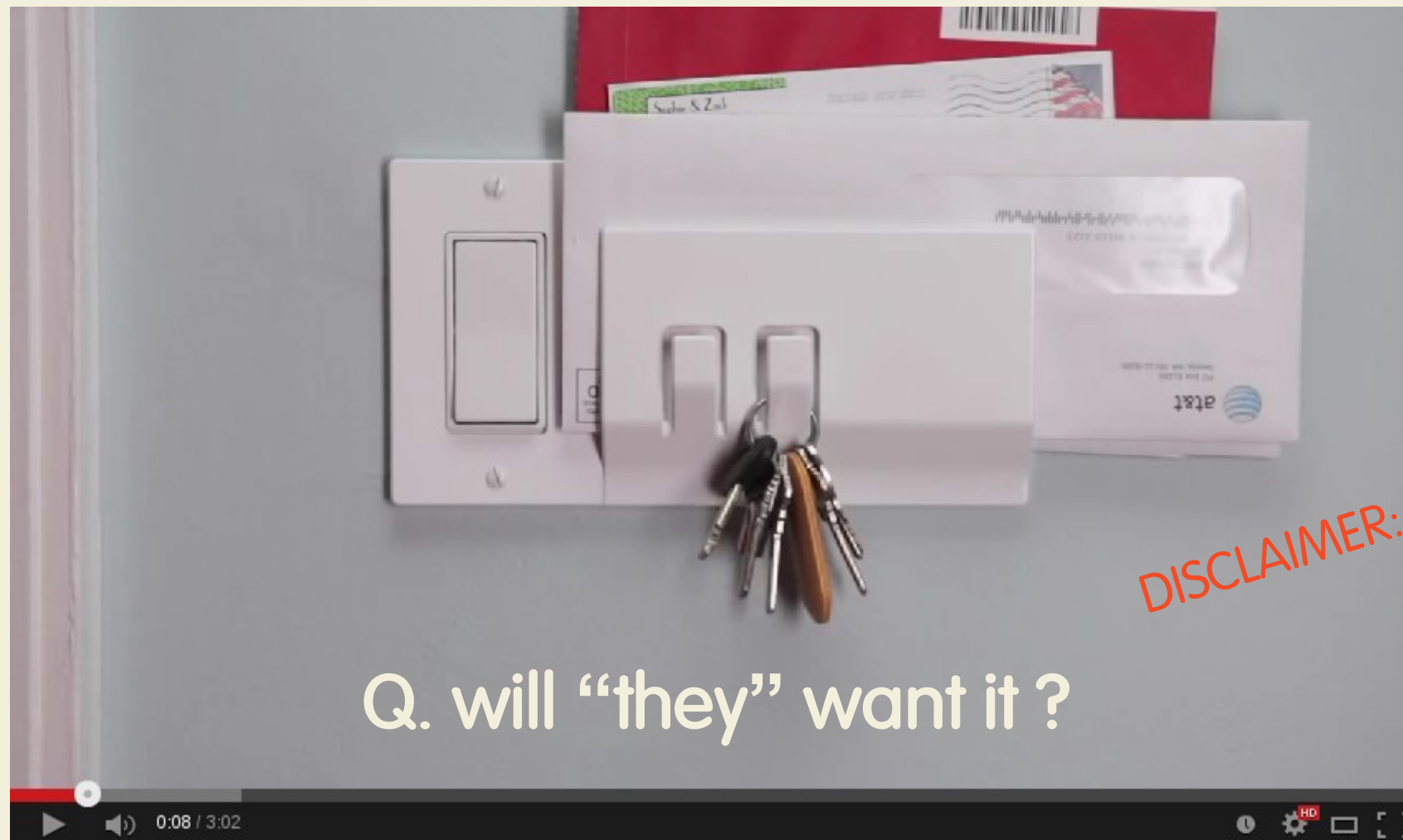


Pretotyping [pree-tuh-tahy-ping], verb:

Validating the market appeal and actual use
of a potential new product objectively and
with the smallest possible investment
of time and money.

Hacking IKEA

Upwell design studio had an idea for
a functional switch cover that holds your stuff



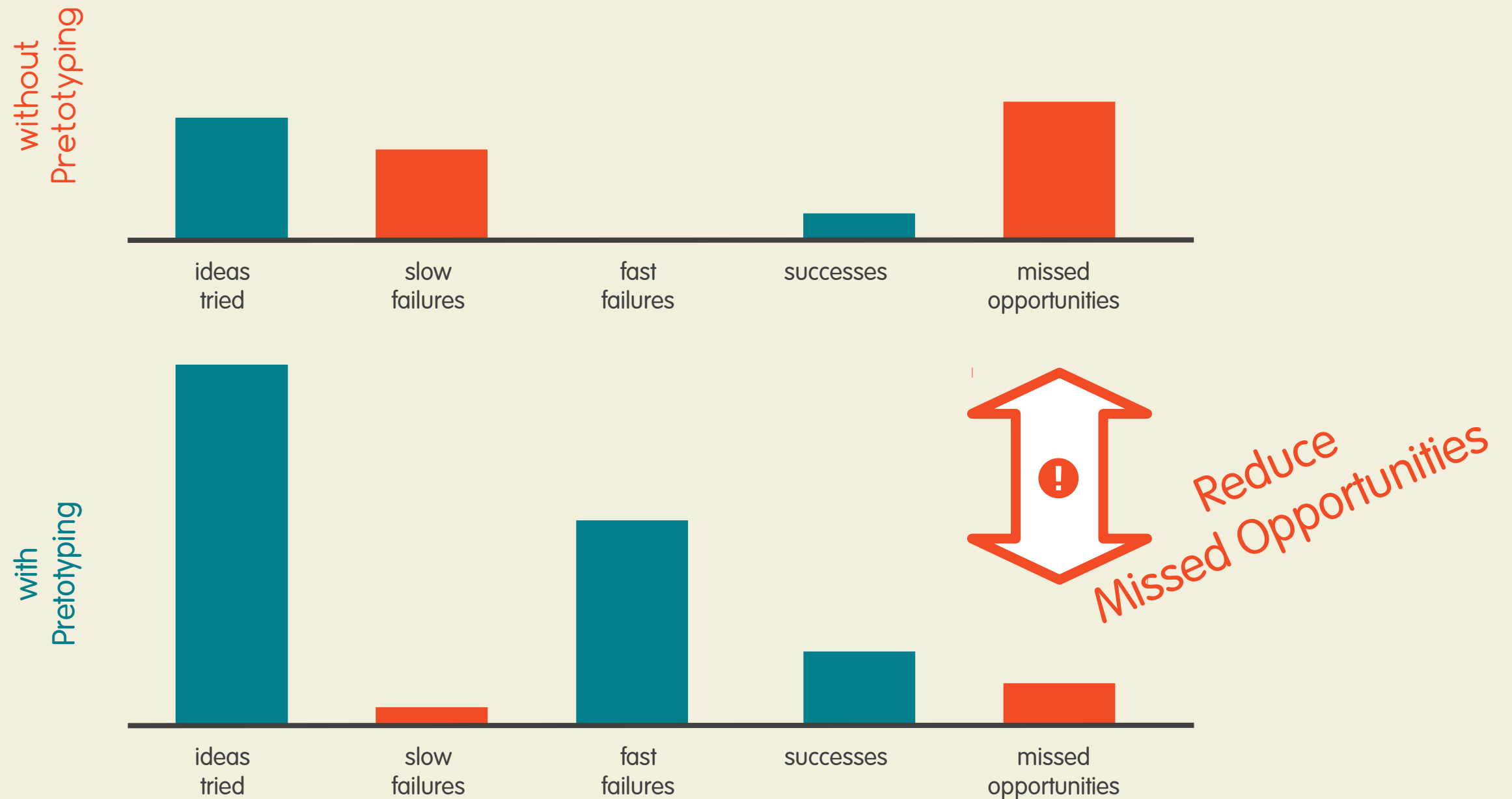
Justin Porcano "Design studio Upwell hacks IKEA..." <https://vimeo.com/79313674>

Observe / Measure

the Tangible Perception of a Real Product

in Context, with Real People

Run Many Small Experiments



A Sampling of Prototyping Techniques

Fake Door

Pretotyping workshop pretotype



Landing pages



WHAT

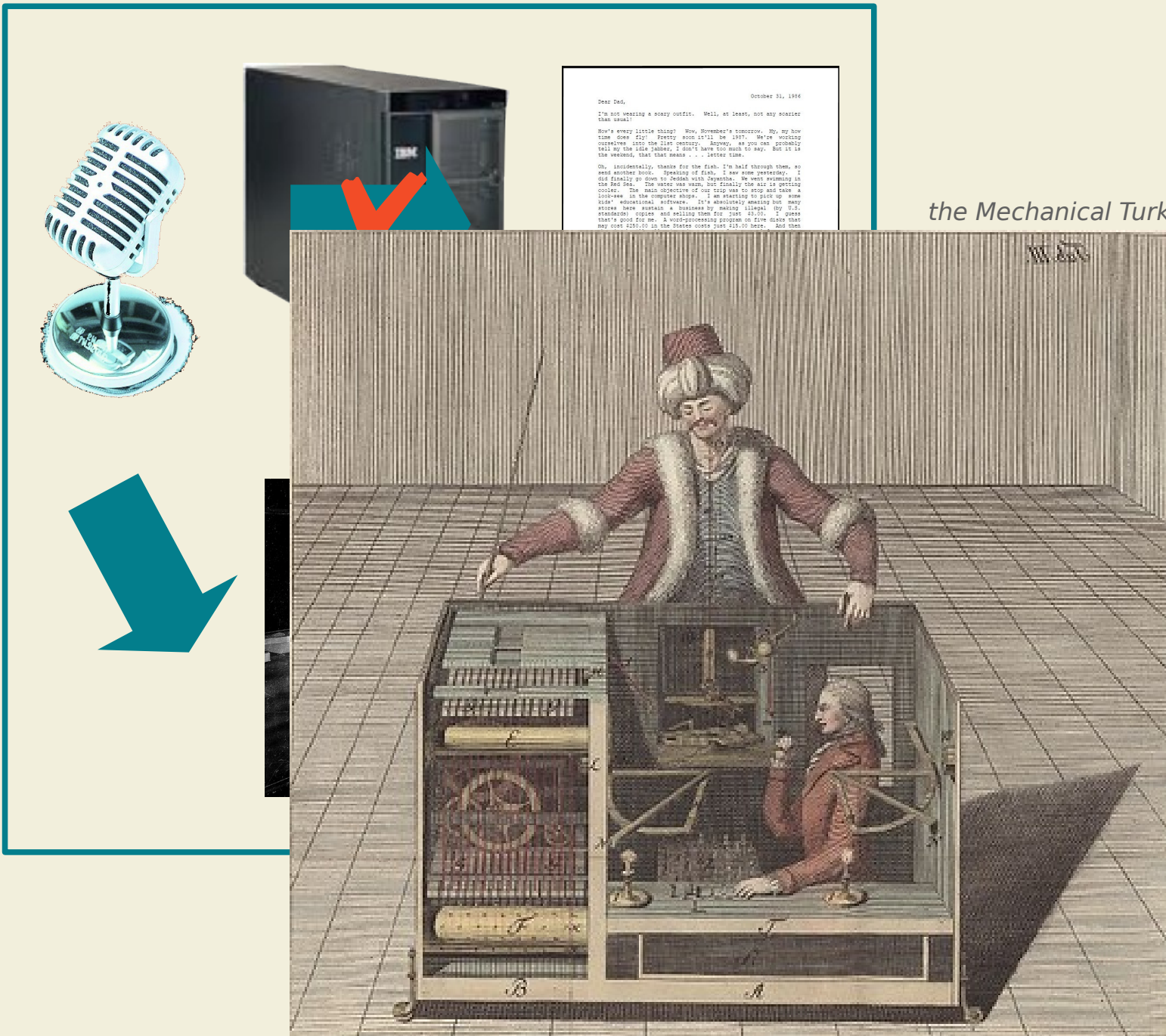
A marketing entry point for an
as-yet undeveloped idea

WHY

The solution doesn't exist yet
and you want to capture
an initial indication of interest
at next to zero cost

Mechanical Turk

IBM Text-to-Speech



WHAT

Use human power
to simulate a technology
that would take too much
money or time to build

WHY

To postpone
costly development
until proven market interest

Impersonator

New “skin”

Existing
Product or
Packaging

WHAT

Using an existing product or service
to pose as the new offer under test

WHY

Save on development costs
while the market interest is
not validated yet

Tesla and Lotus Elise



Pinocchio

WHAT

An inanimate (or “dumb”) artifact
acts as a proxy for the real thing

WHY

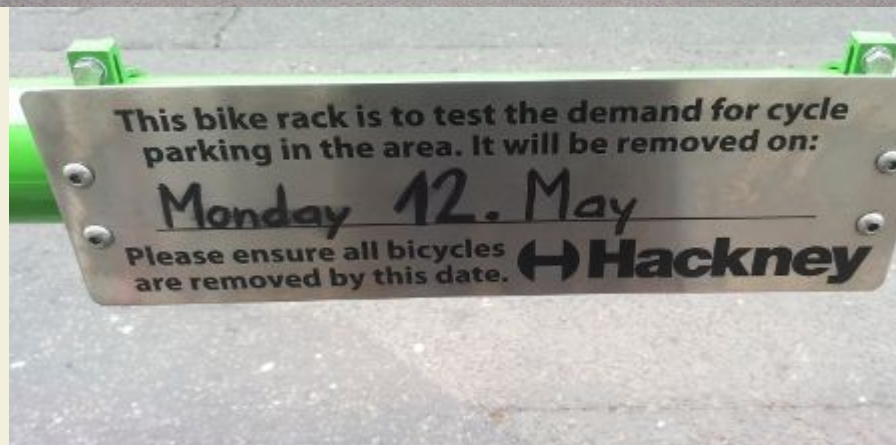
The solution doesn't exist yet
and you want to validate early on
certain parameters of the product
like form factor, features and usability



Palm Pilot and its Pinocchio

One-Night Stand

Best-Buy Electronics Trade-in



Bike rack testing in Hackney



*Trial location of Fruit of the Loom
new premium brand Seek-no-Further*

WHAT

A complete service experience
without the infrastructure required
by a permanent solution

WHY

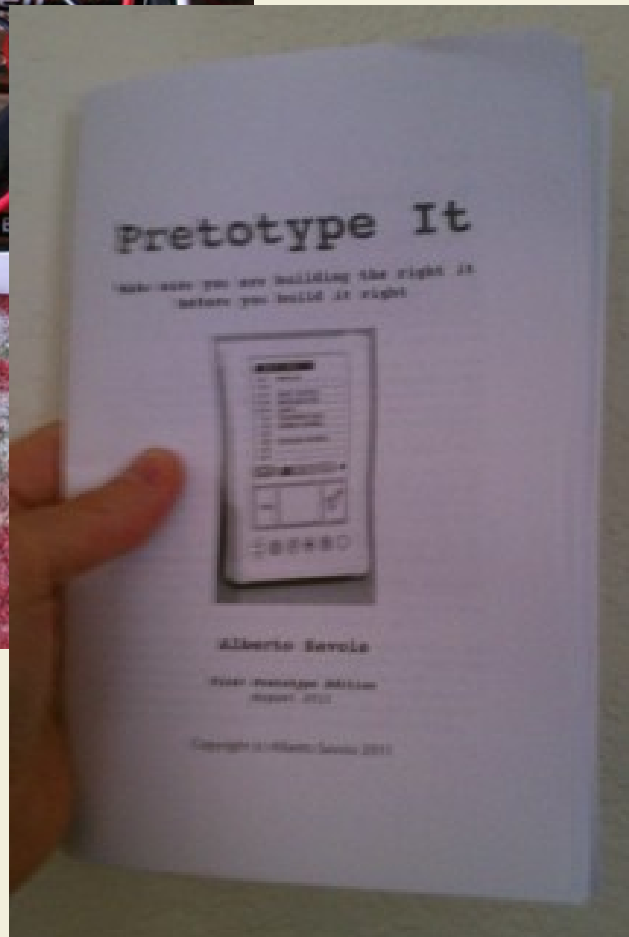
Avoiding investments
for large infrastructures
and validating market interest
and actual use

M. V. P. Minimum Viable Product

iPod external battery



Pretotype It book



WHAT

The transition from pretotyping
to prototyping of the eventual product

WHY

you need to put
the real product
into customers' hands
in order to permit a fair test

Pretotyping Practice

Pretotyping practice



Pretotyping practice



Pretotyping practice



Why You Can't Afford NOT to Prototype

Return on Prototyping Investment

How much (%) can you learn from a given pretotype compared to the full product.

How much would it cost (time or \$) to develop and test/market a prototype or the final product.

$$\text{RPI} = \frac{\text{Learning (Pre)}}{\text{Learning (Pro)}} \times \frac{\text{Cost (Pro)}}{\text{Cost (Pre)}}$$

How much (%) can you learn from a prototype or final product. Set to 100% for the final product.

How much would it cost (time or \$) to create and test a given pretotype.

What should we learn? (before we blow \$100M)

Will people use the web to order groceries?

What % of people would use it?

How often would they use it?

Will people in cities use it more than people in suburbs?

What kind of products will they buy?

What's the \$ value of average transaction?

How many will continue to use it after the novelty has worn off?

...



\$ RPI for



$$\text{RPI} = \frac{\text{Learning (Pre)}}{\text{Learning (Pro)}} \times \frac{\text{Cost (Pro)}}{\text{Cost (Pre)}}$$

RPI =

\$ RPI for



$$\text{RPI} = \frac{\text{Learning (Pre)}}{\text{Learning (Pro)}} \times \frac{\text{Cost (Pro)}}{\text{Cost (Pre)}}$$

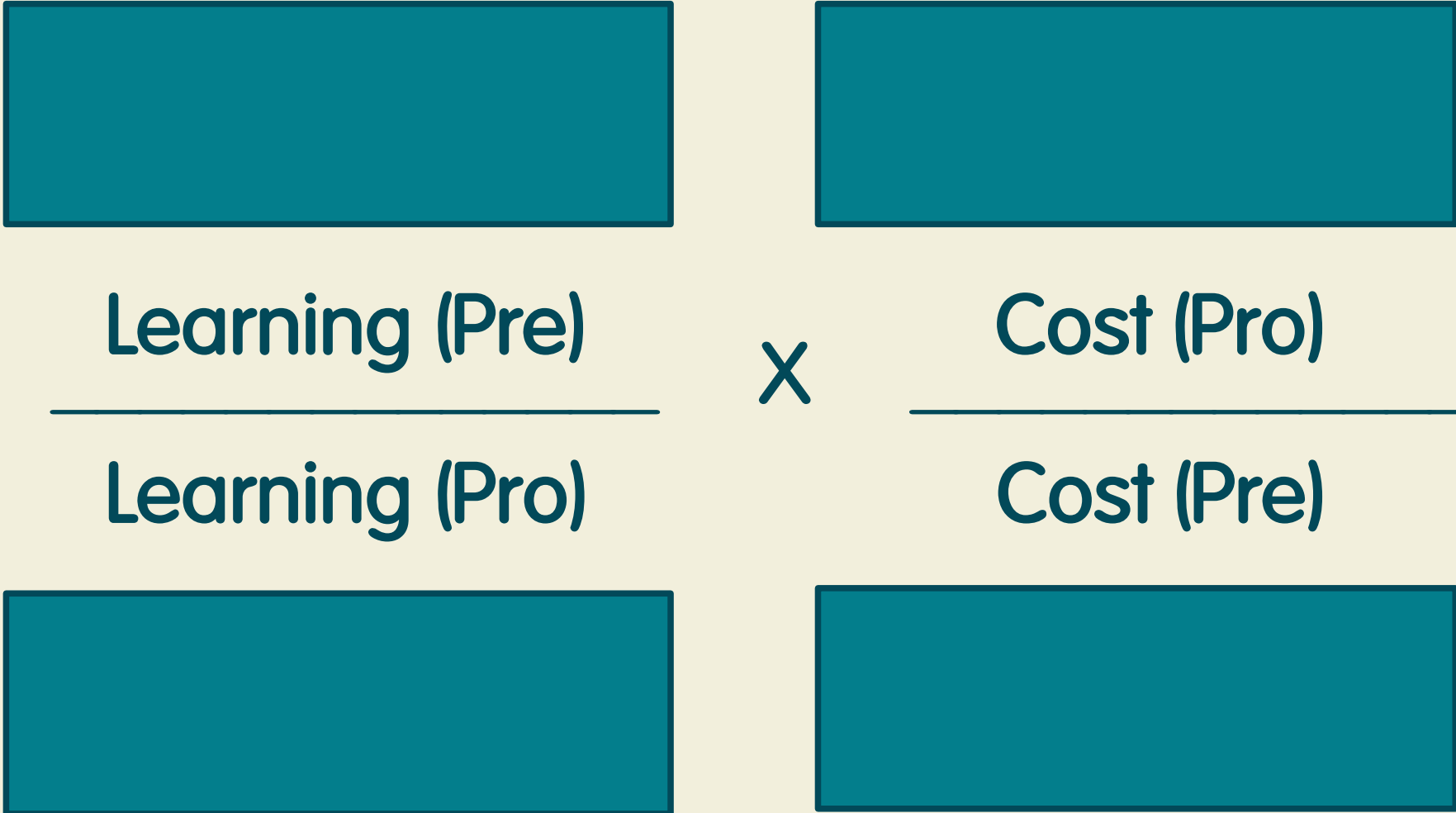
0.75	\$ 100M
1.00	\$ 1M

$$\text{RPI} = 0.75 \times 100 = 75 = 7500\% \text{ cheaper}$$



time RPI for

IBM



The diagram illustrates the RPI formula with four empty teal boxes for input. The first box is above 'Learning (Pre)', the second is above 'Cost (Pro)', the third is below 'Learning (Pro)', and the fourth is below 'Cost (Pre)'. The formula is presented as:

$$\text{RPI} = \frac{\text{Learning (Pre)}}{\text{Learning (Pro)}} \times \frac{\text{Cost (Pro)}}{\text{Cost (Pre)}}$$

RPI =

time RPI for

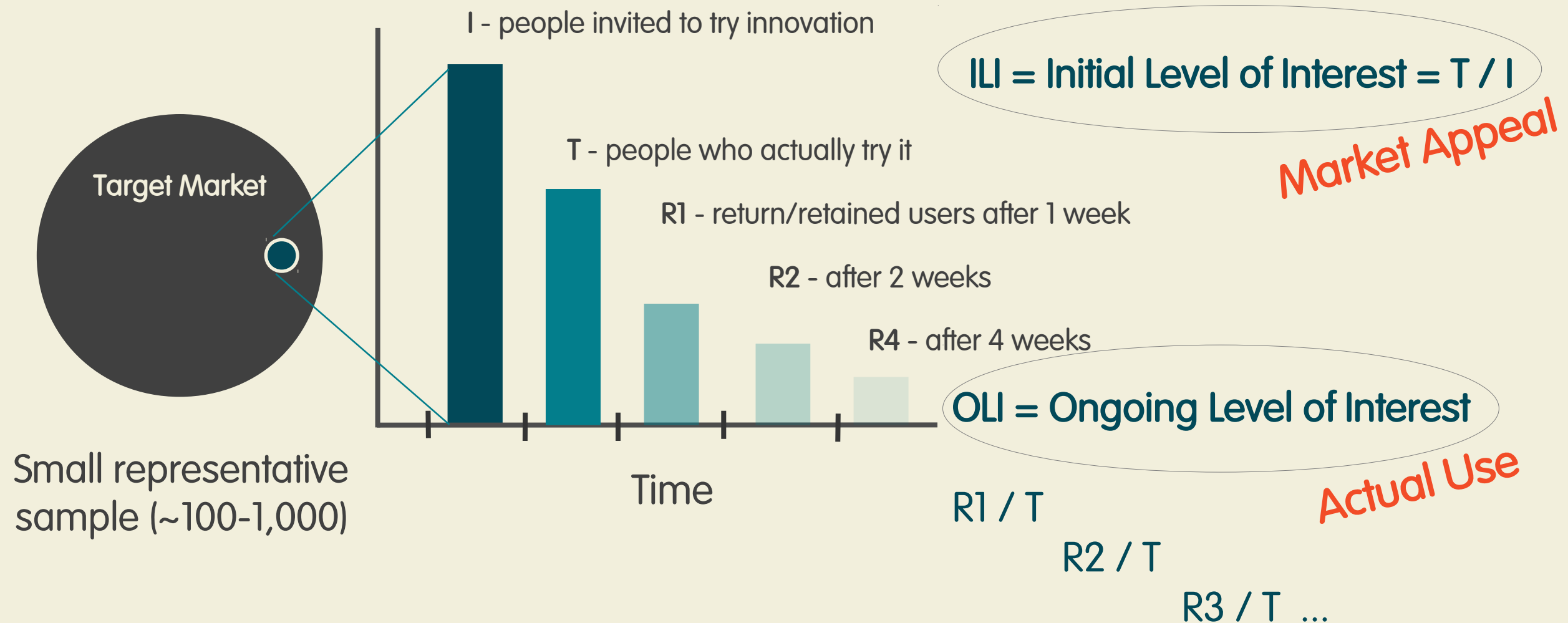


$$\text{RPI} = \frac{\text{Learning (Pre)}}{\text{Learning (Pro)}} \times \frac{\text{Cost (Pro)}}{\text{Cost (Pre)}}$$

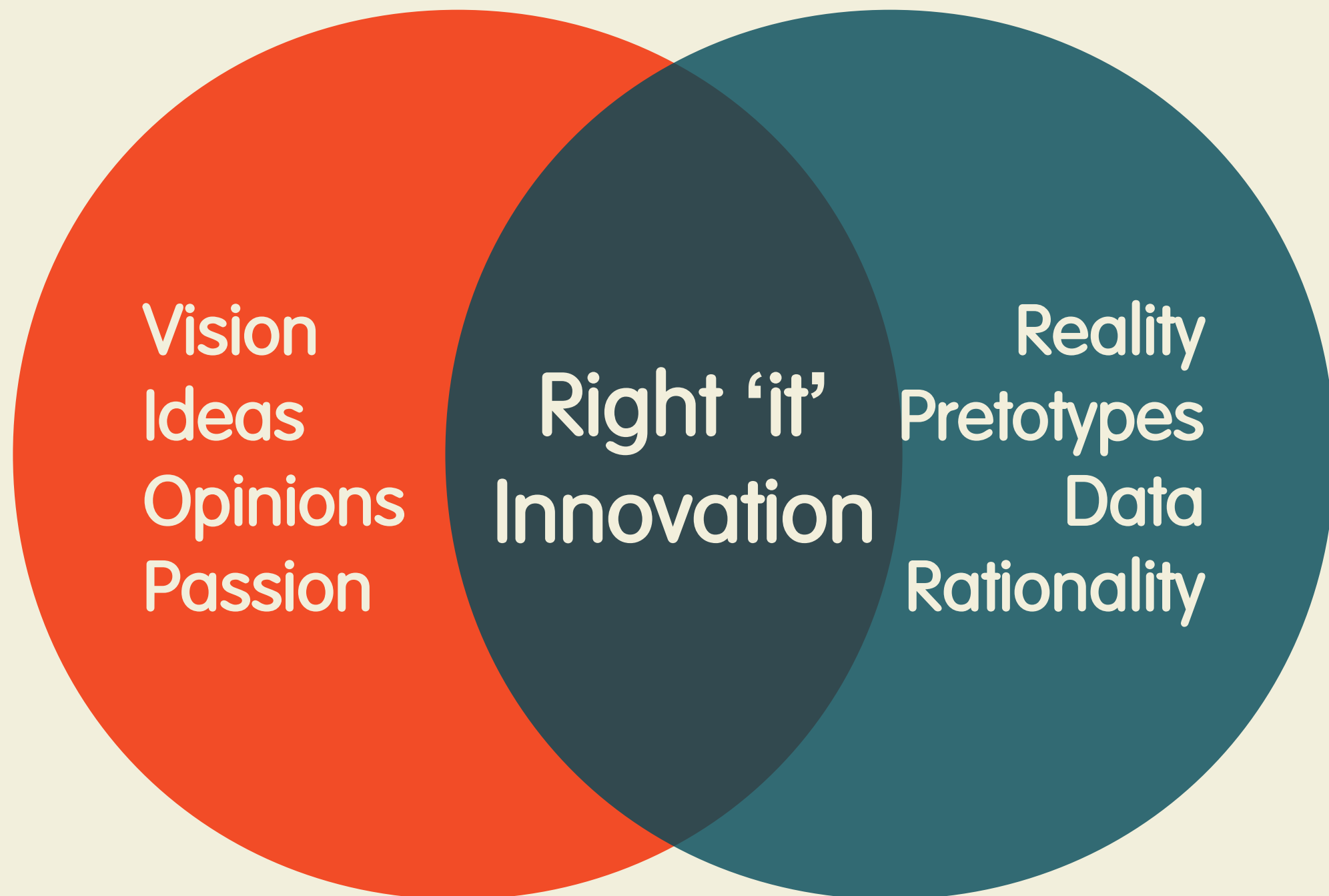
0.50	60 mo
0.80	1 mo

$$\text{RPI} = 0.62 \times 60 = 37.5 \text{ “faster learning”}$$

Initial and Ongoing Level of Interest



Vision vs. Hallucination



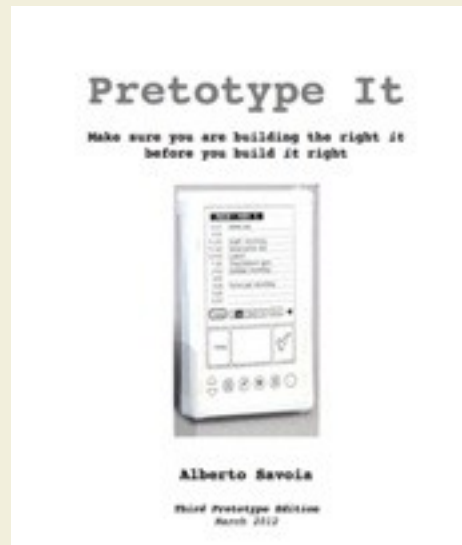
Validate your idea from day 1
to make sure it meets
your customers' needs (market interest)
and they like it (actual use)
Learn, refine it and test again.

Till you get the right product for them (the right it)
Then build it (make it right)



Want to Learn and Do More?

Books



Free PDF and on Amazon



Follow @Pretotyping @PretotypeCo

Videos



Workshops

Pretotyping @ Work

Innovate like a startup, go to market like a grownup.

A one day, hands-on, workshop on prototype-driven innovation; designed specifically for established companies that want to accelerate their rate of successful innovation.



"Make sure you are building the right 'it' before you build 'it' right."

Alberto Savoia
author of
Pretotype It

Pretotyping

Pretotyping, an approach to innovation developed and perfected at Google, will dramatically increase your rate of innovation while greatly improving your odds of market success.

Why do you need prototyping? The biggest challenge in innovation is not coming up with new ideas; it's identifying which of those ideas will be successful in the market. Pretotyping can help you save millions wasted in perfecting and bringing innovative, but unsuccessful, products to market.

Stanford University, Palo Alto, California.
Tuesday, June 19, 2012

Join us on the beautiful Stanford campus for an intensive, immersive and hands-on experience that will revolutionize the way your company approaches innovation.

"You are going to love the prototyping workshop! It completely energized the team - ideas became reality only hours/days after the conclusion."
Mike Jones, Google Inc.

Program Highlights

- Learn the theory, tools and applications of prototyping from the team that developed and perfected it.
- Learn and apply objective and quantifiable innovation metrics.
- Practice prototyping on dozens of scenarios.
- Learn how large and established organizations use prototyping techniques to help them innovate at the speed of startups.

See next page for the full workshop program.

www.pretotypelabs.com
EMAIL: info@pretotypelabs.com

We offer the same workshops offered at Stanford and Google, with the very same material used in those classes.



Q & A

leonardo@pretotype.co.uk

Thank You!

Pretotype.co.uk

@PretotypeCo

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@lionzan

Feel free to email me and connect on Twitter and LinkedIn!