

PRETOTYPING

<https://www.pretotyping.org/>

Pretotype It

Make sure you are building the right *it*
before you build *it* right



Alberto Savoia


*First Pretotype Edition
August 2011*

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<http://www.pretotyping.org/>

Every year, companies launch thousands of new products of all types and in all markets—with each team believing and hoping that “This is the one.” All of these launches are carefully followed and tracked by various market research companies. One such company, Nielsen, has been analyzing thousands of worldwide product launches for a long time. Here is a summary from one yearly report:

One year: 24,543 new products*



Failed	27%
Disappointed	16%
Cancelled	37%
Success	14%
Star	6%
Total	100%

* Nielsen

Source: www.pretotyping.org

The law of market failure

- **80-90%** new products fail in the market [1]
- **4/5** startups lose funder's money [2]
- **90%** mobile apps don't produce money
- **78%** project disappear within 4 years
- **16%** to **50%** strategic projects are abandoned |
- **47%** companies estimates **50%** of projects fail

The Law of Market Failure:

*Most new products will fail in the market,
even if they are competently executed.*

In criminal law, a person is presumed innocent until proven guilty. When it comes to market law, we should presume a potential new product to be a failure—at least until we've collected enough objective evidence to make us believe otherwise.

Source: www.pretotyping.org

The law of market failure

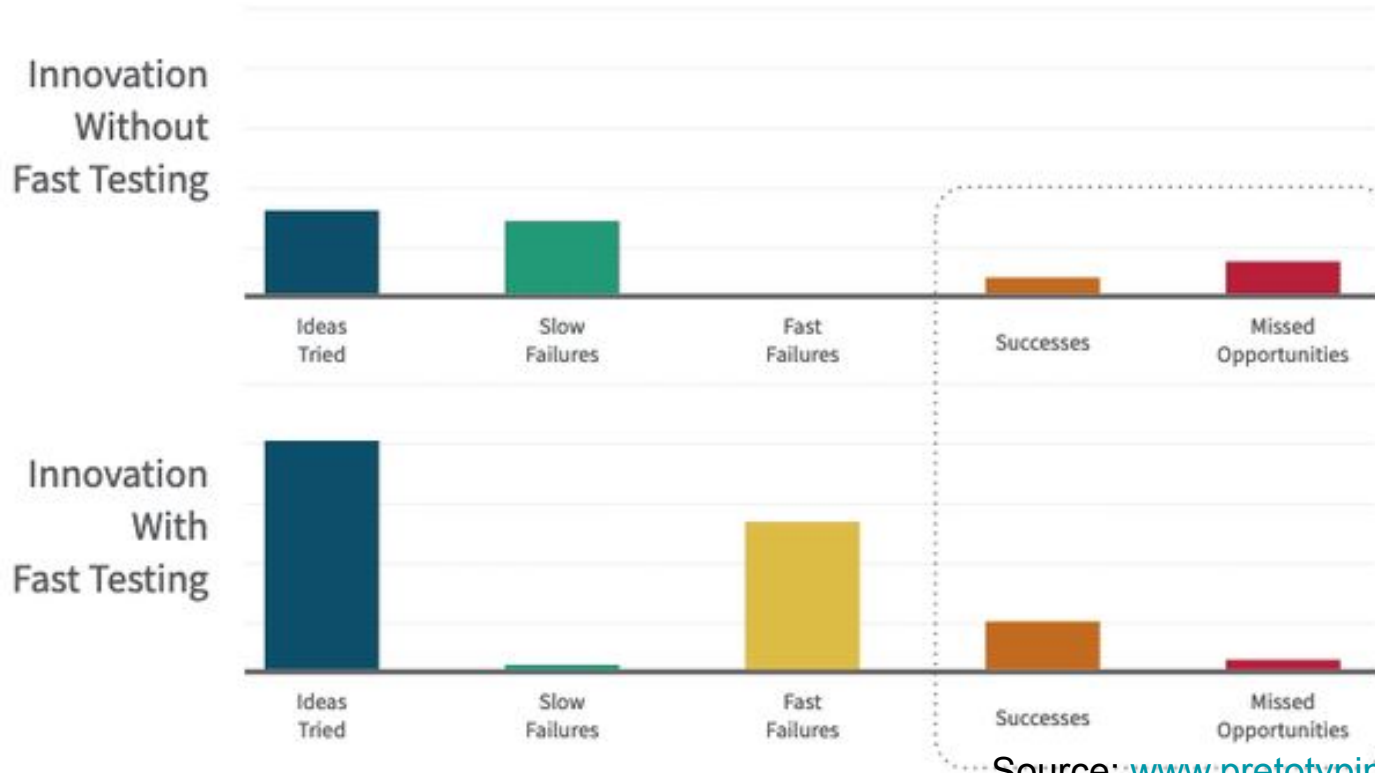
There is only one way to fight the Law of Market Failure: **test the market** for your ideas objectively, rigorously, and **quickly before you invest to develop them**.

Pretotyping provides you with the tools and techniques you need to validate your idea with minimal resources and in a very short time (as little as a few hours.)



Time and \$ Invested Source: www.pretotyping.org

The law of market failure in innovation



Source: www.pretotyping.org

False Positive

■ Webvan, late 90s

- raised \$122+M, Goldman Sachs, Sequoia Capital
- Raised \$375M in IPO, 1999
- In total, raised over \$1B
- Bankruptcy July 2001



■ Motorola's Iridium satellite phone system (\$6B for 66 satellites)

■ Segway (~\$180M in funding)



■ Google Wave real time messaging platform (~\$20-30M)

■ "John Carter" by Disney (Cost \$275M + \$100M in marketing)

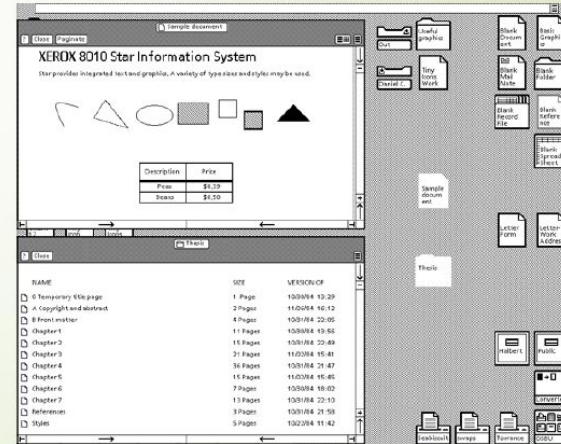
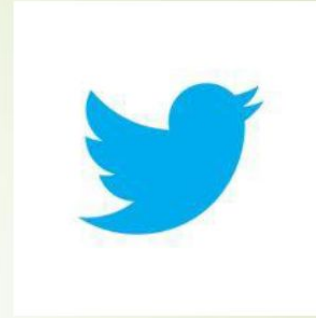
■ New Coke, Pepsi Clear (est. \$50M).



Source: www.pretotyping.org

False Negative

- SMS
- Twitter
- Google
- Xerox PARC



Source: www.pretotyping.org

THOUGHTLAND

The Lost in Translation Problem: An idea is an abstraction—and a subjective one at that; it's something that you imagine or picture in *your* head. The moment you try to communicate what you see in your *mind's* eye to someone else you run into a challenging translation problem—especially if your idea is new and different from anything else they've seen. The way you imagine the new product and its uses may be completely different from the way *they* imagine it.

The Prediction Problem: Even if your audience's abstract understanding of your idea is a close match to your original intention, people are notoriously bad at predicting whether they would actually want or like something they have not yet experienced, or if and how they would actually use it.

Source: www.pretotyping.org

THOUGHTS WITHOUT DATA ARE JUST OPINIONS

False positives can lead you to believe that your idea is immune to The Law of Market Failure, so you invest too much too soon in a new product that will eventually flop. False negatives, on the other hand, can scare you away from giving your idea a chance, and you end up prematurely scrapping the next Twitter, or Google, or Tesla.

To minimize your chances of getting false positives or negatives you need to collect something more substantial and objective than opinions—especially when the people who give you those opinions have no skin in the game. And the only way to do that is to transport your idea from Thoughtland to a more concrete environment—let's call it *Actionland*.

In **Thoughtland** you use abstract **ideas** to ask hypothetical **questions** and collect **opinions**.

Thoughtland: Ideas -> Questions -> Opinions

In **Actionland** you use **artifacts** to prompt **actions** and collect **data**.

Actionland: Artifacts -> Actions -> Data

Source: www.pretotyping.org

The Pretotyping Manifesto

innovators beat ideas

pretotypes beat productypes

building beats talking

simplicity beats features

now beats later

commitment beats committees

data beats opinions

Source: www.pretotyping.org

Pretotyping Manifesto addendum:

don't finish what you've started

failure is an option

scarcity bring clarity

the more the messier

reinvent the wheel

play with fire

Source: www.pretotyping.org

Pretotype

Prototypes can help you fail faster, but often not fast enough or cheaply enough. The more you invest in something the harder it is to let it go and admit it was the wrong thing. Once you have a “proper prototype” working, it’s tempting to work on it a little longer and invest in it a little more: “If we add this one feature I am sure that people will finally use it.” Prototypes often turn into *productypes* – a prototype gone too far – and you can kiss fail-fast goodbye.

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Source: www.pretotyping.org

Pretotype

Between abstract ideas and “proper prototypes” there are *pretotypes*. Pretotypes make it possible to collect valuable usage and market data to make a *go/no-go* decision on a new idea at a fraction of the cost of prototypes: hours or days instead of weeks or months, and pennies instead of dollars. Pretotyping helps you fail fast, recover fast and leaves you plenty of time, money, energy and enthusiasm to explore new tweaks or ideas until you hit on something that people seem to want – the rare and wonderful *right it!*

Pretotype



Prototype



Product



Source: www.pretotyping.org

Pretotype

- **A pretotype is a mock-up of the intended product or service that can be built in minutes, hours or days instead of weeks, months or years.** The art and science of pretotyping is aimed to help innovators:
- Identify the core feature and *core experience* of the new potential product.
- Decide what core features can – and should – be mocked-up (or dramatically simplified).
- Use mock-ups to systematically test and collect feedback and usage data.
- Analyze usage data to determine the next step.

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Source: www.pretotyping.org

The Seven Pillars of PRETOTYPING

1. Obey the Law of Market Failure.
2. Make sure you are building The Right It.
3. Don't get lost in Thoughtland.
4. Trust only in Your Own DAta (**YODA**).
5. Pretotype It.
6. Say it with numbers.
7. Think global, test local.



Source: www.pretotyping.org

PRETOTYPING FLOW

Step 1: Isolate the Key Assumption: *What is the one assumption about your idea that, if false, means it's definitely not the right it?*

Step 2: Choose a Type of Pretotype: What type of pretotype will let you to isolate and test your key assumption?

Step 3: Make a Market Engagement Hypothesis: How many (and what kind of) people will do what with your pretotype? Your hypothesis can be as simple as: X% of Y will do Z --> A solid hypothesis takes the guesswork and opinion out of testing. https://www.youtube.com/watch?v=4sZMHAMN0DQ&ab_channel=TheRightIt%E2%80%9494VideolessonsbyAlbertoSavoia

Step 4: Test Your Pretotype: Now put your pretotype into the real world, and see how people interact with it. Start small — one place, one time.

Step 5: Learn, Refine, Hypozoom: Evaluate your results. Refine your pretotype with your new data. If your hypothesis held, decide what other situations you should test your pretotype in to get a complete picture (what we call "hypozooming"). https://www.albertosavoia.com/uploads/1/4/0/9/14099067/hypozooming_video.pdf
https://www.youtube.com/watch?v=bKfBbYsJIZc&ab_channel=TheRightIt%E2%80%9494VideolessonsbyAlbertoSavoia

Source: www.pretotyping.org

FAKE DOOR

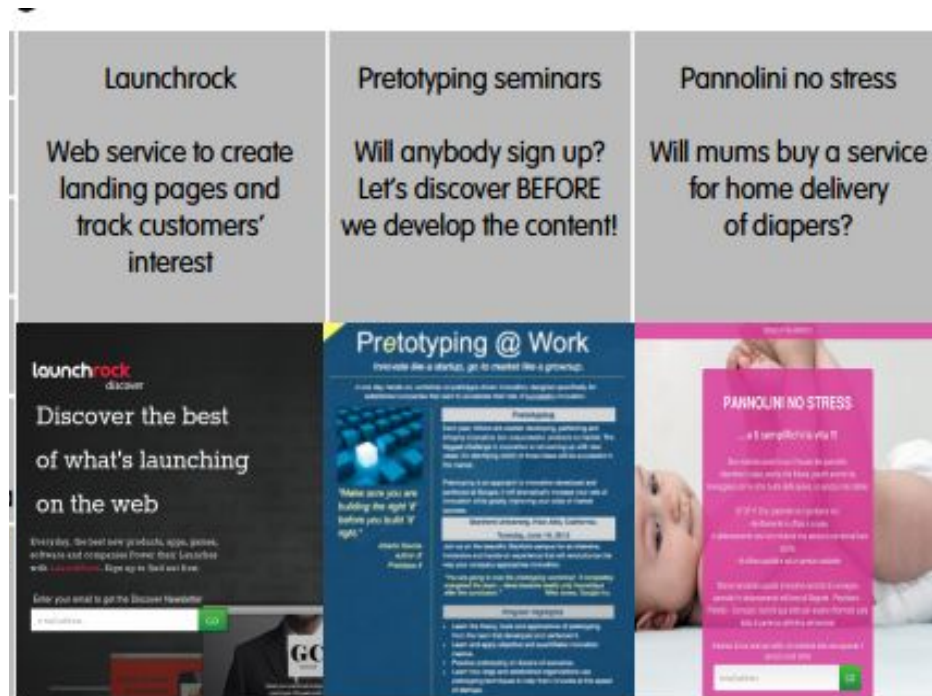


- What** A marketing entry point for an as-yet undeveloped idea.
- Why** The solution doesn't exist yet and you want to capture an initial indication of interest at next to 0 cost.
- When** Your idea can be concisely described and presented to potential customers where you would expect to find them, and you are confident you can manage the expectations of enthusiastic customers by following up within an appropriate time-frame.
- How** Advertising a new product or feature, then tracking click-through and customer response rate to see who would be interested in an offering.
- Where** Web tech enables a very robust method that includes: online ads + landing pages + simple response forms. Same approach also works with emails, offline posters and other media.

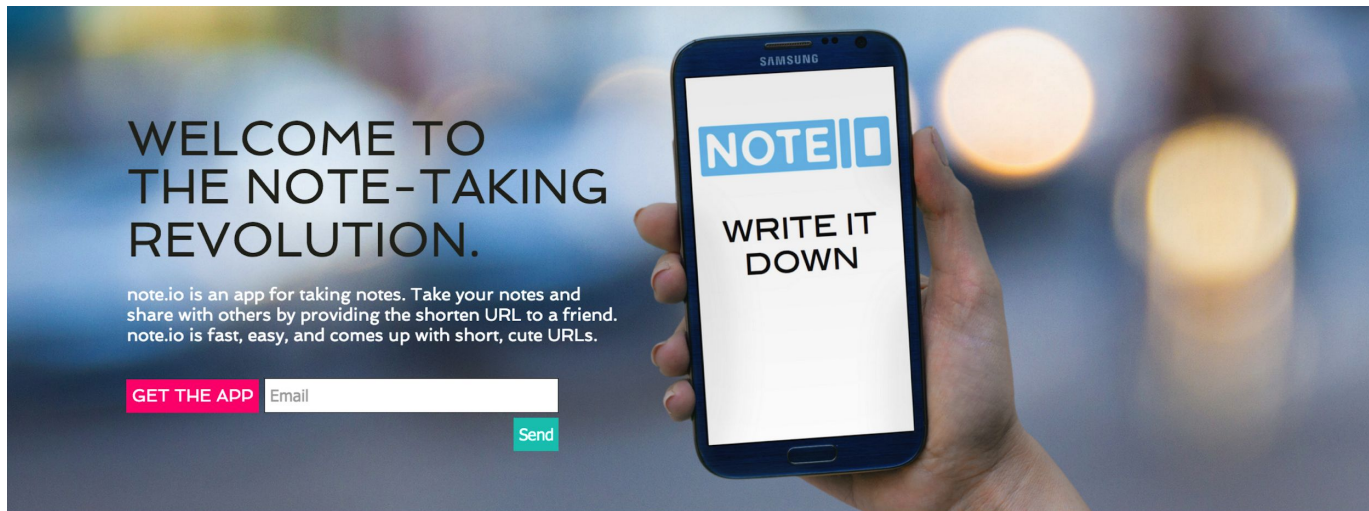
the Fake Door can be used to advertise a service that is not ready yet and measure interest from users, e.g. a new process to renew a license, a new expert system to consolidate social services, etc.

<https://www.nesta.org.uk/blog/development-and-testing-for-public-labs-fake-it-before-you-make-it/>

FAKE DOOR



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THE ONLY NOTE-TAKING APP YOU'LL EVER NEED

Always there when you need it - note.io syncs with the cloud so you can stay on top of just about anything across all your devices.



WINNER "BEST NEW APP IDEA 2014"

Distinguished judges rated note.io as beautiful & functional. "note.io is beautifully designed, simple to use and user friendly." - *Steve Ballmer*

<https://hackernoon.com/fake-door-the-mvp-before-the-mvp-61197ed264a3>

MECHANICAL TURK



- What** Use human power to simulate a technology that would take too much money or time to build
- Why** To postpone costly development until market interest is validated.
- When** When the final product requires the development of expensive and complex technology, and those actions and outputs could be simulated by humans.
- How** Use a realistic interface to deliver target customers the essential experience of a proposed technology, simulating functionality of a complex back-end using human input.
- Where** In the same real-life situation where the innovation will be used.

Algorithmic-based solutions are needed to reach scale while keeping the cost low. But before finding the right "advisor" to build, a Mechanical Turk approach can be used to experiment, where human experts can hide behind an online form or a SMS-based application.

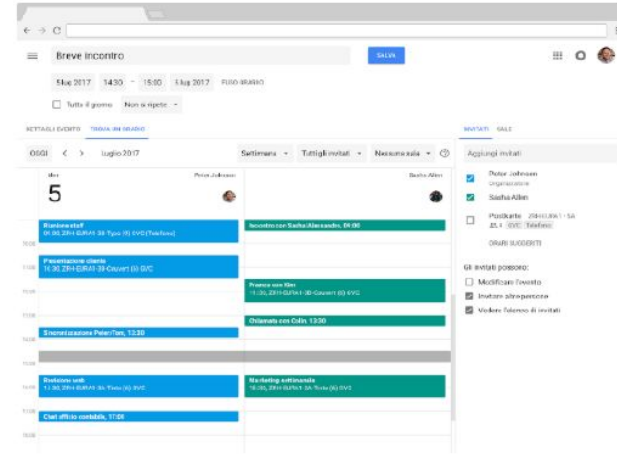
<https://www.nesta.org.uk/blog/development-and-testing-for-public-labs-fake-it-before-you-make-it/>

MECHANICAL TURK

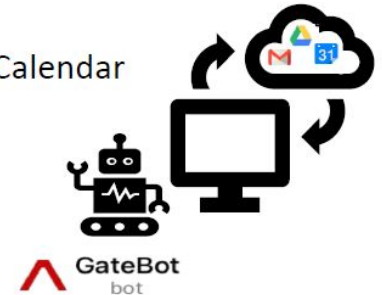


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Advanced schedule system



GateBot + G Suite Google Calendar



IMPERSONATOR

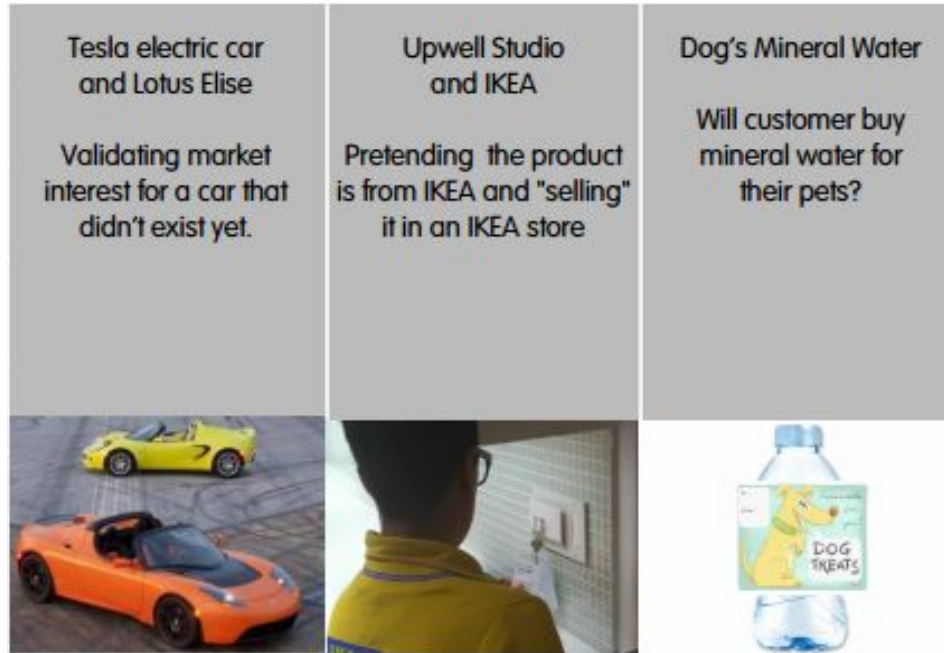


- What** Use an existing product or service to pose as the new offer under test.
- Why** Save on development costs while the market interest is not yet validated.
- When** A test of the value of the solution depends on the customers' ability to interact with a full-scale design, and you need to create a plausible stand-in for the size, shape, color, features, etc. of the solution.
- How** Apply a new skin to an existing product that can act as a good substitute to validate market interest.
- Where** In the same real-life situation where the innovation will be used or accessed.

In the context of public labs, this could mean revamping an existing service by providing a different front-end on top of an existing API.

<https://www.nesta.org.uk/blog/development-and-testing-for-public-labs-fake-it-before-you-make-it/>

IMPERSONATOR



<https://vimeo.com/79313674>

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Source: www.pretotyping.org

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 a key design parameter early on.
- When** Your solution requires a significant switching or behavioral adaptation by customers to develop a new habit OR You expect demand to be sensitive to the appearance or form factor of your solution.
- How** Use a proxy to validate certain parameters of the product like form factor, features and usability.
- Where** In the same real-life situation where the innovation will be used.

A Pinocchio pretotype is one in which a fake artifact acts as a proxy for the real thing. The most famous example is the wood model of the Palm Pilot mentioned above.

Pinocchio pretotypes are the perfect conduit for role play design to encourage people to test your product or service, but also to explore other ways that the "it" you are building is tailored to their needs.

PINOCCHIO



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ONE NIGHT STAND

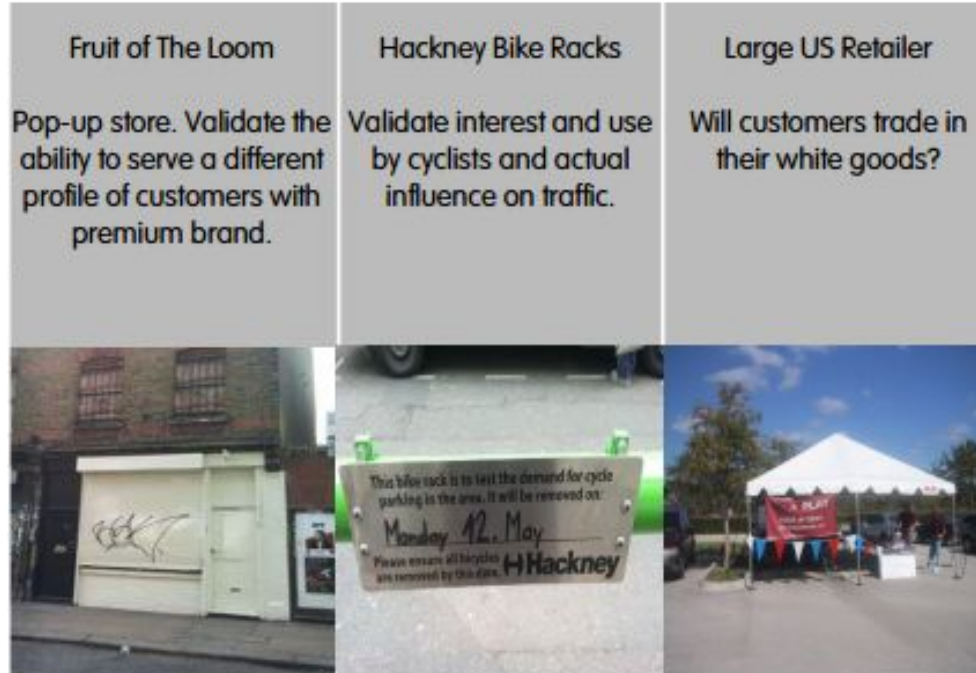


What	A complete service experience without the infrastructure required by a permanent solution.
Why	Avoid investment in complex infrastructure and validate market interest and actual use.
When	<ul style="list-style-type: none">- The solution is — or depends critically upon — an interactive service experience.- You expect demand for the offer will be sensitive to the choice of channel, and you need to test a number of possible customer interception points.- You want to validate a large homogeneous market before scaling up.
How	Delivering target customers the essential experience within an extremely narrow geo scope and time frame.
Where	In the same real-life situation where the innovation will be used but with limited time and geo scope.

The goal here is to reduce cost or to target a well-known population. In the spirit of failing fast, if the One Night Stand pretotype applied to a friendly region and receptive population does not succeed, then you know that you are probably building the wrong "it".

<https://www.nesta.org.uk/blog/development-and-testing-for-public-labs-fake-it-before-you-make-it/>

ONE NIGHT STAND



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FACADE

- What** Borrow or rent expensive equipment, space, and assets to simulate a more stable or complex infrastructure underlying your offering.
- Why** Avoid investments in expensive equipment, space, and other assets while validating interest.
- When**
- The solution requires major upfront investment, in equipment, space, or assets.
 - You expect demand will vary based on customer confidence in your infrastructure.
- How** Delivering target customers the essential experience, while communicating stability and complexity.
- Where** In the same real-life situation where the innovation will be used, but with all assets and space borrowed or rented cheaply.

<https://www.youtube.com/watch?v=9ko6oFb-jQY>

NEXT STEP... PRODUCTION?

MINIMUM VIABLE PRODUCT

MINIMUM VIABLE PRODUCT		Pretotype it book	An iPod Battery Pack	The Treadmill Bike
WHAT	The transition from pretotyping to prototyping of the eventual product	Is there an audience for this content?	Is it handy to use one?	How is it like to run on a treadmill to propel a bike????
HOW	Creating an artifact which delivers the core function(s) of the full solution			
WHY	you need to put the real product into customers' hands in order to permit a fair test			
WHERE	In the same real-life situation where the innovation will be used			
WHEN	You have learned all you can about market demand from simpler pretotypes (Fake Door, Pinocchio, Mechanical Turk, One Night Stand, or Impersonator) and further insight requires a deeper customer interaction with a functioning artifact			

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Pretotyping MEMES



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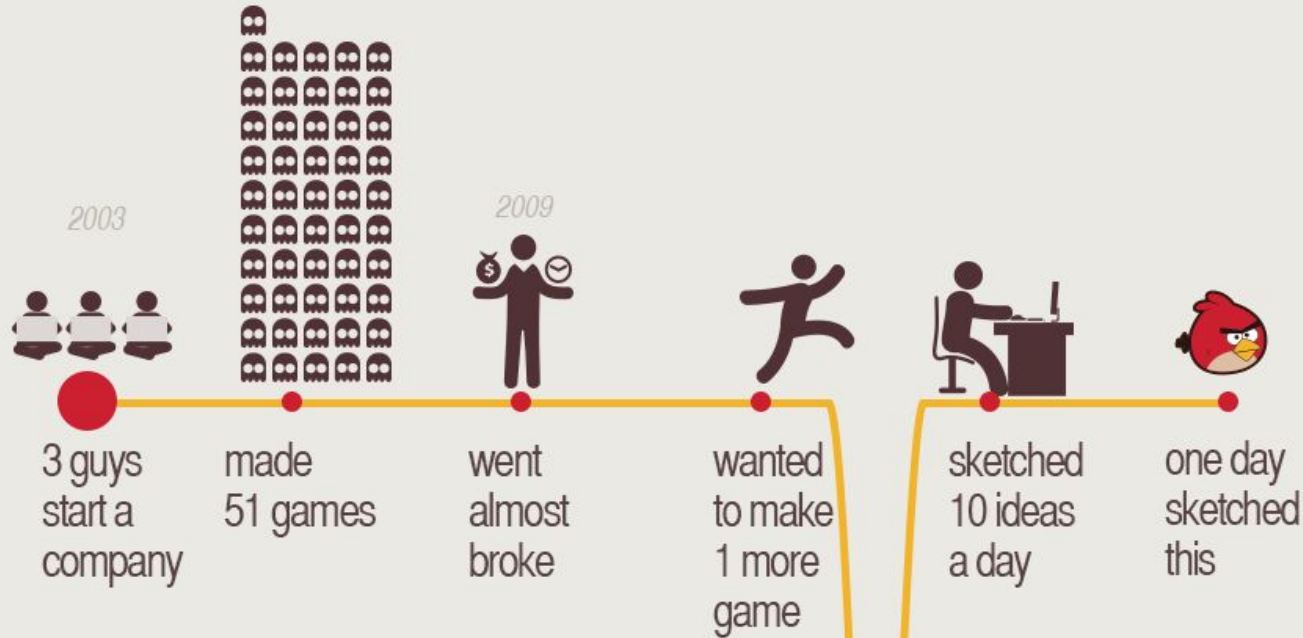
Pretotyping tools

- Website [Weebly.com](https://www.weebly.com): Particularly useful for fake door pretotypes to test using Google/Facebook ads.
- [Omnigraffle](https://omnigraffle.com): Shares across multiple pages and spits out clickable
- [Appery](https://appery.io) - free, cloud-based app platform - [http://appery.io](https://appery.io)
- UX prototype <https://www.figma.com/>
- <https://careerfoundry.com/en/blog/ux-design/prototyping-tools/>
- And even more drag and drop app builders:
 - <https://codiqa.com/>
 - <http://www.kinvey.com/>
 - <http://cloudbase.io/>
 - <http://mobile.conduit.com/>
 - <http://mobileroadie.com/>
 - <http://www.theappbuilder.com/>
- Marketplace builder <https://www.shopify.com/>

HOW ANGRY BIRDS STARTED

by Anna Vital

or How Many Tries Are Behind the 2-Billion Download Game



<https://blog.adioma.com/how-angry-birds-started-infographic/#:~:text=The%20startup%20behind%20the%20game,are%20launching%20their%2051st%20game.>

THERE IS NO FAILURE EXCEPT IN NO LONGER TRYING.

Elbert Hubbard

Alberto Savoia Pretotyping Lecture @ Stanford

https://www.youtube.com/watch?v=3sUozPcH4fY&feature=emb_logo