



Aalto University  
Media Factory

# Digital\_Fabrication\_Studio.01

## Media, Business, Platforms

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## This afternoon:

- \* **The Media ecosystem of Fabbing**
- \* **Platforms for Fabbing and projects**
- \* **Business models for Open projects**



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01.

# The Media ecosystem for Digital Fabrication, Open Design and DIY

# Wired

The screenshot shows the homepage of wired.com. At the top, there's a large "WIR ED" logo with a "Subscribe" button to its right. Below the logo, there are two main news stories:

- ULTRA-HIGH-SPEED INTERNET**: **Google Fiber Splits Along Kansas City's Digital Divide**. This story includes a map of Kansas City showing different service areas and a photo of two men, one in a purple shirt and one in a grey shirt, smiling.
- GETTING A FACE LIFT**: **How Katy Perry Inspired LinkedIn's Global Redesign**. This story includes a photo of a man in a purple shirt and a woman in a grey shirt sitting together.

On the right side, there are more news items and a video gallery:

- VIDEO GALLERY**: **12 Awesomely Inspiring Paralympic Moments**. It features a photo of a Paralympic athlete in mid-air.
- NEW MOVIES**: **Underground Brings Drama to Julian Assange's Teenage Hacker Days**. It includes a photo of a movie poster.
- WIRED OPINION**: **AT&T's FaceTime Blocking Hurts the Deaf**.

At the bottom of the main content area, there are several smaller news snippets:

- WAR PLANS**: **U.S. Attack on Iran Would Take Hundreds of Planes, Ships, and Missiles**. It includes a photo of three fighter jets in flight.
- A DIFFERENT MOLD**: **New App Lets Users Design and 3D-Print iPhone Cases**. It includes photos of an iPhone and a red case.
- STORM WATCH**: **Why All Hurricanes Look the Same From Space**. It includes a photo of two hurricanes.
- COMPUTER SECURITY**: **Sleuths Trace New Zero-Day Attacks to Chinese Hackers Who Hit Google**.
- THE FIRST AMENDMENT**: **ACLU Sues Police for Seizing Man's Phone After Recording Alleged Misconduct**.
- CYBERSECURITY**: **Pirate Bay Founder Arrested for Alleged Hack**.

On the far right, there's a large advertisement for Marriott featuring a man in a plaid shirt and the text "EXPERIENCE THE WORLD OF MARRIOTT".

At the very bottom of the page, there's a navigation bar with links for "SUBSCRIBE", "SECTIONS", "BLOGS", "REVIEWS", "VIDEO", "HOW-TOS", "MAGAZINE", "WIRED ON YOUR TABLET", "Sign In | RSS Feeds", and a search bar.

A monthly American magazine and on-line periodical (since 1993) that reports on how new and developing technology affects culture, the economy, and politics.

Source: <http://www.wired.com>

# DIYDrones from Chris Anderson (Wired)

The screenshot shows the homepage of the DIY Drones website. At the top, there's a navigation bar with links for HOME, VIEW CART, MY ACCOUNT, and HELP. Below the navigation is a search bar with a magnifying glass icon and a 'SEARCH' button. The main header reads 'DIY DRONES' with a subtitle 'AMATEUR UAV SUPERSTORE' and a note 'PROPELLED BY 3DRobotics'. A sidebar on the left lists categories under 'DIY PRODUCTS' such as All Products, Arduino, ArduPilot, ArduPlane, ArduCopter, PX4 Autopilot, Planes & Multicopters RTF, ARF, GPS, Sensors and IMUs, Wireless/Telemetry, Video/OSD, Ground Station, Servos, Cables/Connectors, R/C electronics, Other electronics, Apparel and other, and R.I.P. There's also a 'FOLLOW US' section with links to 3DRobotics social media pages. The central content area features a FedEx cargo plane in flight with the text 'SAME DAY SHIPPING IN STOCKED ITEMS! FEDEX BEFORE 3PM PST USPS BEFORE 12PM PST'. To the right, a 'Top Sellers' section highlights the '3DR ArduCopter Hexa-B Frame + Motors Kit' at \$349.99, showing a hexacopter drone. Below it, a detailed description of the kit includes a bulleted list of components like frame boards, arms, and motors. Further down, a 'New Products' section lists items like a Female T plug - Male XT60 adapter, DF13 7 Position Connector, MB1200 XL-MaxSonar-EZ0, and Pre-crimped cables for DF13 connectors 5cm.

Funded in 2007, a store and an online community with 26,000 members.

Source: <http://diydrones.com/> + <https://store.diydrones.com/>  
<http://diydrones.com/profiles/blogs/tour-of-the-new-3d-robotics-factory>

# DIYDrones from Chris Anderson (Wired)



**How I Accidentally Kickstarted the Domestic Drone Boom**

By Chris Anderson | June 22, 2012 | 6:32 am | Categories: Drones

Like 615 Send 123 Share 105 Tweet 1,437 people like this. Be the first of your friends.

An ArduCopter Quad drone, a four-rotor open-source quadcopter, is shown flying against a clear blue sky. The drone has a central blue electronic control unit with red and black wiring, and four black arms extending outwards, each ending in a black propeller. The image is framed by a white border.

Open source drones, like this ArduCopter Quad from 3D Robotics, now outnumber military drones in the US. Photo: Misha Gravenor

At last year's Paris Air Show, some of the hottest aircraft were the autonomous unmanned helicopters—a few of them small enough to carry in one hand—that would allow military buyers to put a camera in the sky anywhere, anytime. Manufactured by major defense contractors, and ranging in design from a single-bladed camcopter to four-bladed multicopters, these drones were being sold as the future of warfare at prices in the tens to hundreds of thousands of dollars.

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The role of Media in promoting DIY projects ...

Source: [http://www.wired.com/dangerroom/2012/06/ff\\_drones](http://www.wired.com/dangerroom/2012/06/ff_drones)

# “Makers” from Chris Anderson

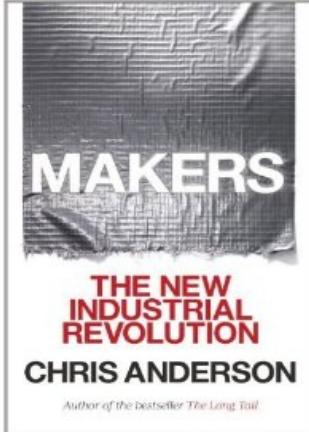
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Chris Anderson (Author)

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Publisher: learn how customers can search inside this book.

**Book Description**  
Publication Date: **October 2, 2012**

Wired magazine editor and bestselling author Chris Anderson takes you to the front lines of a new industrial revolution as garage tinkerers and enthusiasts are about to be unleashed, driving a resurgence of American manufacturing. A generation “the long tail of things”.

Not only magazine, but also books...

# O'Reilly Media: Make

The screenshot shows the homepage of O'Reilly Media. At the top, there's a logo featuring a small owl and the text "O'REILLY" with the tagline "Spreading the knowledge of innovators." To the right are links for "Your Account" and "Shopping Cart". Below the header is a navigation bar with links for "Home", "Shop", "Radar: News & Commentary", "Answers", "Safari Books Online", "Conferences", "School of Technology", and "Community". A "Popular Topics" section lists "Programming", "JavaScript", "iPhone", "Android", "Python", "Head First", "HTML5 & CSS", "Microsoft", "Java", "Perl", and "Linux". Social media icons for YouTube, Flickr, Facebook, Twitter, Google+, and RSS are also present.

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Presented by Lesa Snider  
Date: Tuesday, Sep 11 at 10 PT

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- Designing for jQuery Mobile
- Writing Extensible JavaScript Without Getting Too Enterprisey
- The Economic Impact of Open Source on Small Business
- An Introduction to Machine Learning

**JavaScript Starter Kit**

**Find the Tools You Need to Get Started with JavaScript**

*"JavaScript is now a language every developer should know."*  
—Mike Loukides, Vice President of Content Strategy

JavaScript is everywhere: servers, rich web client libraries, HTML5, databases, even JavaScript-based languages. If you've avoided JavaScript, this is the year to learn it. And if you don't, you risk being left behind.

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**Deal of the Week**

An American media company (since 1978) that publishes books and Web sites and produces conferences on computer technology topics.

Source: <http://oreilly.com>

# Make: a magazine



An American quarterly magazine published by O'Reilly Media which focuses on do it yourself (DIY) and/or DIWO (Do It With Others) projects.

Source: <http://makezine.com/magazine/> + <http://make-digital.com/make/>

# Make: a blog

The screenshot shows the homepage of the Make: blog. At the top, there's a navigation bar with links for MAKE, Kits, Maker Faire, Make: Projects, and Maker Shed, along with a search bar. Below the navigation is a banner for "MyLifeScoop.com" featuring a magazine cover and a "SUBSCRIBE!" button. The main header "Make:" is in large red letters, with "Blog Magazine Projects Reviews Shop" in smaller text below it. A "Hot Topics" section lists Kids, Arduino, 3D Printing, Computers & Mobile, Craft, and Raspberry Pi, with a "See All Topics" link. The main content area has three articles: 1) "DIY Ten Step Sequencer" by Michael Colombo, showing a circuit board with a sequencer, published on 2012/09/07 at 12:00 pm. 2) "Mini Maker Faire Action" by Sabrina Merlo, showing a photo of a faire, published on 2012/09/07 at 11:15 am. 3) "Nominate Companies For The Makey Awards!" featuring a cartoon robot icon, with text about the awards and categories like Art & Design, Desktop Manufacturing, Computers & Mobile, Craft, Electronics, Imaging, Kids, Makers, Microcontrollers, Recreation & Entertainment, and Robotics. On the right side, there's a sidebar with a "Get MyLifeScoop.com" button, a photo of a laptop displaying the site, and a "Get Free Exclusive Content!" section with an email input field and a "GO!" button, along with a newsletter sign-up message.

Beside the magazine...

Source: <http://blog.makezine.com/>

# Make: an online store

MAKE Magazine Kits Maker Faire Make: Projects Maker Shed

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Shopping Cart: (Your shopping cart is empty.)

\$5 SHIPPING! ON ORDERS OVER \$50   

 **Maker SHED**

ALL PRODUCTS NEW ARRIVALS GIFT GUIDES GIFT CERTIFICATES MAKE CATALOG (PDF)

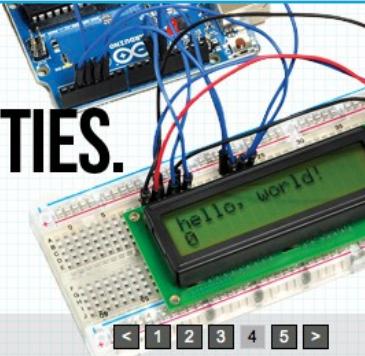
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**NEW ARRIVALS**

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**MAKE: VOLUME 31**

Come check out our newest magazine filled with awesome things to create!

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Beside the magazine...

Source: <http://www.makershed.com/>

# Make: a series of local faires

MAKE Kits Magazine Maker Faire Make: Projects Maker Shed  Search

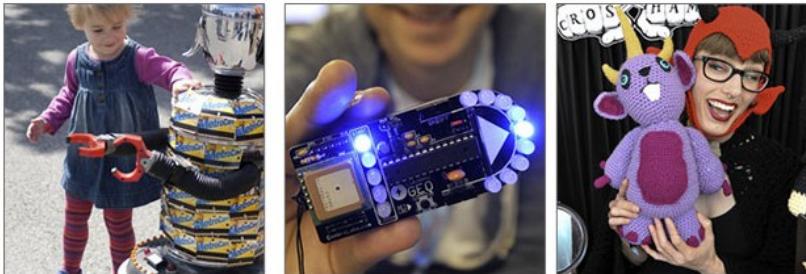
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Saturday, September 29, 2012 - 10am - 7pm  
Sunday, September 30, 2012 - 10am - 6pm



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Beside the magazine ...

Source: <http://makerfaire.com/>

# Make: a series of local faires



Beside the magazine ...

Source: <http://makerfaire.com/map.csp>

# Make: a TV / online series

[Blog](#)[MAKE Magazine](#)[Videos/Podcasts](#)[Make: Projects](#)[Forum/Community](#)[Maker SHED Store](#)

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## Introducing Make: television

Presenting a new national series from MAKE magazine, Twin Cities Public Television, and American Public Television.

Make: is the DIY series for a new generation! It celebrates "Makers" - the inventors, artists, geeks and just plain everyday folks who mix new and old technology to create new-fangled marvels. Check out the [Episode Guide](#) to watch segments and read descriptions of previous episodes.

### [MAKE: television Episode 1: Bicycle Rodeo & VCR Powered Cat Feeder »](#)



For those of you who like to see the whole episodes of Make: television, here's a chance to see episode 1 in all its glory. Meet Cyclocide, an inventive band of performance artists who build outrageous bicycle contraptions straight... [Read More](#)

### [MAKE: television Episode 2: Aerial Kite Photography & Burrito Blaster »](#)



Make: television Episode 2: Maker Cris Benton takes spectacular aerial photographs by rigging remote-controlled cameras to high flying kites. In the Maker Workshop John Park builds a Burrito Blaster, which can propel a burrito 50 yards, and Mister Jalopy... [Read More](#)

### [MAKE: television Episode 3: Steampunk & Pole Camera »](#)



Enter the alternative universe of Jake Von Slatt, a leading Steampunk Maker, who turns modern technology into Victorian works of art. In the Maker Workshop, John Park mounts a remote control camera on a painter's pole to take stunning... [Read More](#)

### [Make: television Episode 4: Fire Sculpture & DTV Antenna »](#)



Meet the Flaming Lotus Girls, a women-centric maker collaborative that creates gargantuan, fire-breathing sculptures. In the Workshop, John Park builds a digital TV antenna from wire coat hangers and a \$10 video camera stabilizer. William Gurstelle shows surprising uses... [Read More](#)

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[Make: Craft:](#)[Maker Faire](#)**FREE  
TRIAL  
ISSUE****Make:  
television****TAKE A  
SHORT  
SURVEY!**

## Welcome to Make: television

[Episode guide and PDFs »](#)  
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Make: television is a television show produced by Twin Cities Public Television and hosted by John Edgar Park which premiered in January 2009 on PBS stations.

Source: <http://makezine.tv/>

# Make: a controller kit

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DISCONTINUED - MakeController Kit v2.0

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**Please note:** This product has been discontinued by the maker. We're looking into a replacement. If you'd like to be notified if we find one, please click on the "e-mail me when back in stock" link and we'll let you know if/when we find a substitute.

**Our Price: \$120.00** DISCONTINUED

**Availability:** Currently Unavailable  
Product Code: MKMT3

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[Click Here To Be Emailed When Back-In-Stock](#)

**You might also like...**

[DISCONTINUED -Building The Perfect PC 2nd Edition](#)

Make teamed up with MakingThings, LLC, to produce the Make Controller Kit, an open hardware solution to create interactive applications.

Source: [http://www.makershed.com/product\\_p/mkmt3.htm](http://www.makershed.com/product_p/mkmt3.htm)

# Make: Craft

The screenshot shows the homepage of the Make: Craft website. At the top, there is a navigation bar with links for MAKE, Kits, Maker Faire, Make: Projects, Maker Shed, Craft, and a search bar. Below the navigation is an advertisement for Amazon.it featuring a product for a mini MP3 player. The main header features the "Make: Craft" logo in large red letters. Below the logo are links for Blog, Magazine, Projects, Reviews, and Shop. A "Hot Topics" section lists Kids, Arduino, 3D Printing, Computers & Mobile, Craft, and Raspberry Pi, with a "See All Topics" button. The main content area displays four project thumbnails: "Stitch it!" showing a fabric pendant, "Folding Chair Makeover" showing two chairs, "Blackwork Stop Motion Animation" showing a person working on a piece of embroidery, and "New York Maker Faire! Sept. 29 & 30, 2012" with a large red banner. There is also a "Fab." section at the bottom right.

A quarterly magazine published by O'Reilly Media which focused on do it yourself (DIY) projects like knitting, sewing, jewelry, metalworking, woodworking, until 2009.

Source: <http://blog.makezine.com/craftzine/> [http://en.wikipedia.org/wiki/Craft\\_\(magazine\)](http://en.wikipedia.org/wiki/Craft_(magazine))

# Makerbot TV

The screenshot shows the homepage of the MakerBot TV website. At the top, there's a large "MakerBot TV" logo. To its right are links for "About MakerBot TV" and "Go to makerbot.com →". Below the logo is a video player showing a video titled "MakerBot TV S02E11 - MakerBot A Robot!". The video thumbnail features three spools of filament (yellow, blue, red) and the text "MakerBot TV". To the right of the video, the episode title is displayed in bold red text. Below the title is a brief description of the video content, mentioning the design team's work on a Robot Petting Zoo for the Maker Faire. There are navigation arrows on either side of the video player. Below the video player, there are sections for "RECENT VIDEOS" and "SUBSCRIBE". The "RECENT VIDEOS" section lists two episodes: "MakerBot TV S02E12 - Maker Faire" (posted May 21, 2012) and "MakerBot TV S02E11 - MakerBot A Robot!" (posted May 14, 2012). The "SUBSCRIBE" section includes links to follow via RSS, Twitter, and Facebook. On the right side, there's a "RECENT COMMENTS" section with a comment from "Craig The Fabricator" about a previous episode.

**MakerBot TV S02E11 - MakerBot A Robot!**

The MakerBot design team is building a Robot Petting Zoo to bring to this year's Maker Faire. In this video you'll get a behind-the-scenes look at how they conceptualized, designed and created these amazing DIY robots! Visit us at [MakerBot.com](#) Thank You: Michael Curry, Adam Fontenault, Jason...

**RECENT VIDEOS**

**May 21, 2012**  
**MakerBot TV S02E12 - Maker Faire**  
In this special Maker Faire edition of MakerBot TV, R.Maker takes you on a tour of the faire and then we chat with a few of the many MakerBot Operators we ran into over the weekend. Thank you so much to everyone who joined in the fun! Keep it awesome! Visit us at [MakerBot.com](#) Thank You:...

**May 14, 2012**  
**MakerBot TV S02E11 - MakerBot A Robot!**  
The MakerBot design team is building a Robot Petting Zoo to bring to this year's Maker Faire. In this video you'll get a behind-the-scenes look at how they conceptualized, designed and created these amazing DIY robots! Visit us at [MakerBot.com](#) Thank You: Michael Curry, Adam Fontenault, Jason...

**SUBSCRIBE**

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**RECENT COMMENTS**

I thought I had read something once about using acetone... Used sparingly, my understanding is that you ...

Craig The Fabricator said about MakerBot TV S02E09 - Finishing ...

Awesome! I've felt for a long time that these

An online TV show produced by Makerbot, for promoting their 3D printers.

Source: <http://makerbot.tv/>

# Makerbot TV

# MakerBot TV

[About MakerBot TV](#)

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September 7, 2011

## MakerBot TV Launch Episode!



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[MakerBot TV Season 1  
Episode 11](#)



[MakerBot TV Season  
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[MakerBot Sends  
Stephen Colbert to  
Space](#)

An online TV show produced by Makerbot, for promoting their 3D printers.

Source: <http://makerbot.tv/LtHr/makerbot-tv-launch-episode/>

# Thingiverse (from Makerbot)

The screenshot shows the Thingiverse homepage. At the top, there's a navigation bar with links for THINGS, TOOLS, BROWSE, and BLOG. On the right, there's a search bar and a button labeled "SEARCH". Below the navigation, a banner reads "Digital designs for real, physical objects. A Universe of Things!" and features a large blue "UPLOAD A THING" button. The main content area is titled "Universal iPhone camera mount" and includes a thumbnail image with a "FEATURED" badge. Below the title, it says "Created by marinodrake" and "Created on Aug 27, 2012". There are also links to "Gadgets > Camera" and "Featured on Aug 27, 2012". The description text reads: "Universal iPhone camera mount for attaching your iPhone to anything you want to film! Designed for filming timelapse videos of 3d prints or anything you want! Adjustable arms to allow you to film from a number of angles, should attach to most printers or just about anything, here's an example using the camera mount printing thing:12105: [youtube.com/watch?v=nVrfkTOeyTc](http://youtube.com/watch?v=nVrfkTOeyTc)". Below the description are several small thumbnail images of the 3D print. At the bottom of the page, there are sections for "Downloads" (listing files like "ARM 1.STL", "ARM 2.STL", "ARM SWI...STL", and "CAP.STL") and "Instructions" (with a numbered list of assembly steps). To the right, there's a sidebar titled "Latest From The Thingiverse Blog" featuring a thumbnail for "Lost and Found: Air Hockey Edition".

A website for sharing 3D digital files that can be printed (with Makerbot printers).

Source: <http://www.thingiverse.com/thing:29258>



Aalto University  
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02.

# Platforms Digital Fabrication, Open Design and DIY

# A platform

= an extremely valuable and powerful ecosystem that quickly and easily scales, morphs, and incorporates new features (called planks), users, customers, vendors, and partners.

The most vibrant platforms embrace third-party collaboration. The companies behind these platforms seek to foster symbiotic and mutually beneficial relationships with users, customers, partners, vendors, developers, and the community at large. At their core, platforms today are primarily about consumer utility and communications.

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Simon, P. (2011). *The Age of the Platform: How Amazon, Apple, Facebook, and Google Have Redefined Business*. Motion Publishing.

# A platform

Attributes	Pre-Platform Age	Platform Age
<i>Target Market</i>	Predominantly business-oriented. Planks used in an office by employees on a single device (PC).	Both business- <i>and</i> consumer-oriented. Planks used everywhere by everyone on multiple devices.
<i>Ecosystems</i>	Stable. Primarily comprising relatively few arms-length resellers and strategic partners.	Vibrant, robust, dynamic. Comprising individual developers and small partners. Partnerships and communities quickly form, change, and dissolve.
<i>Collaboration</i>	"We'll buy you or we'll crush you." Fixed pie. Competition-based.	"We want to work with you." Grow the pie together. Cooperation-based.
<i>Technology</i>	Mostly closed source or proprietary, sometimes available via expensive licensing.	Mostly open source and less proprietary. Often takes form of a free development kit or an API.
<i>Innovation</i>	Top down. Internal or via acquisition. Usually slow.	Bottom up. External or partner-based or -assisted. Much faster.
<i>Marketing</i>	Centralized single company campaigns, rigidly coordinated and controlled.	Comarketing and partner-driven campaigns. More independent, organic, and decentralized.

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Simon, P. (2011). *The Age of the Platform: How Amazon, Apple, Facebook, and Google Have Redefined Business*. Motion Publishing.

# Etsy: a DIY / Crafts marketplace

The screenshot shows the main interface of the Etsy website. At the top, there's a navigation bar with links for 'Cart 0', 'Your Etsy', 'Help', 'Register', and 'Sign In'. Below the navigation is a header bar with tabs for 'Etsy' (highlighted in orange), 'Buy', 'Sell', 'Community', and 'Blog'. A search bar contains the word 'Handmade' with a dropdown arrow, and a 'Search' button. To the right of the search bar is a large search input field.

On the left side, there's a sidebar titled 'Categories' listing various craft categories: Accessories, Art, Bags and Purses, Bath and Beauty, Books and Zines, Candles, Ceramics and Pottery, Children, Clothing, Crochet, Dolls and Miniatures, Everything Else, Furniture, Geekery, Glass, Holidays, Housewares, Jewelry, Knitting, Music, Needlecraft, and Paper Goods.

The main content area features several promotional sections:

- Showcase**: Fresh picks from sellers (ITEM BY ALICIABOOK)
- Treasury**: Browse member picks (ITEM BY GRIGIO)
- Graduation Showcase**: Sellers' top picks for grads (ITEM BY WOODSYWOOLS)

Below these are 'Handpicked Items' with a 'See more' link. There are eight items displayed in a grid:

- A hand-painted high-heeled shoe by cocopunkz (Love Tamil-Hand Painted... \$270.00 USD)
- A colorful bangle by sisicata (I KILL PXLS Bangle \$50.00 USD)
- A yellow and purple clutch bag by OhGosh (mix'n'match com... \$49.00 USD)
- A small wooden chair and shopping cart set by posystudio (Shopping Day Earrings \$85.00 USD)
- A blue and green ceramic fish figurine
- A close-up of colorful beaded bracelets
- A stained-glass sun catcher with a colorful wheel design
- A red and blue fabric pouch with a large circular button

A 'Picked by Kookoowa' section is also visible on the right side of the grid.

The biggest marketplace for your  
DIY / Crafts projects.

Source: <http://www.etsy.com/>

# Etsy: a platform for DIY

Buy Sell Registry Community Blogs Mobile Help

Etsy Register Sign In Search for items and shops Search Cart

Home > Developers

Developers Home Documentation Discussion API Terms of Use

Your Developer Account Register as a developer Migrate your account

Looking for Etsy Apps? Check out our new App Gallery! It's the best way to find cool and useful tools built upon Etsy's API.

**Developers** Your place to code all things handmade

Welcome To the Etsy Developer Community

We believe in code as craft. Join Etsy's community of makers, artists and creators and build tools that enrich the ways you can shop, sell and connect in the world's most vibrant handmade marketplace.

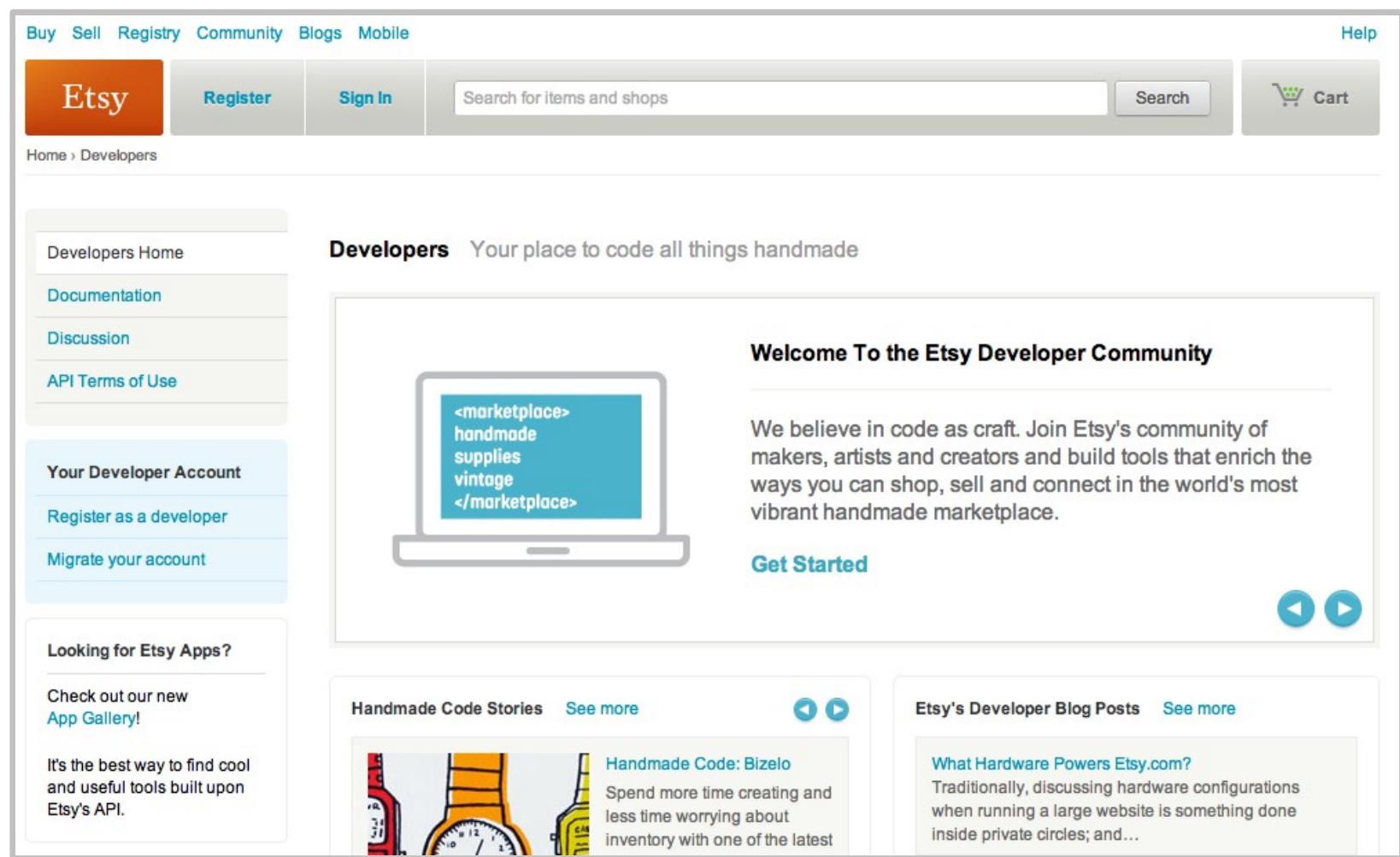
Get Started

Handmade Code Stories See more

Handmade Code: Bizelo Spend more time creating and less time worrying about inventory with one of the latest

Etsy's Developer Blog Posts See more

What Hardware Powers Etsy.com? Traditionally, discussing hardware configurations when running a large website is something done inside private circles; and...



With also open API for interacting with the platform!

Source: [http://www.etsy.com/developers?ref=ft\\_dev](http://www.etsy.com/developers?ref=ft_dev)

# Etsy: a platform for DIY



0:15 / 4:27

[video controls]

The biggest marketplace for your  
DIY / Crafts projects.

Source: <http://www.youtube.com/watch?v=RmXJXYHnWPo>

# Blomming: another platform for DIY

The screenshot shows the homepage of the Blomming website. At the top, there is a navigation bar with links for "HOW IT WORKS", "WHY IT WORKS", "PRICING", "SUPPORT", and "LOG IN". The main header features a green chameleon logo and the text "blomming the social e-commerce". Below the header, there are two main sections: "buy" and "sell". The "buy" section on the left has a green background and displays five product images: a grey shoulder bag, a white owl-shaped pouch, a blue necklace with a large green stone, a patterned shoulder bag, and a blue dress. It also includes the text "FIND & DISCOVER THOUSANDS OF UNIQUE OBJECTS AND FINE ITEMS, ALWAYS UPDATED" and a green "EXPLORE" button. The "sell" section on the right has a light green background and displays the word "sell" in large brown letters. It includes the text "PUBLISH & SHARE ON FACEBOOK, ON YOUR WEBSITE, ON YOUR BLOG, ON BLOMMING". To the right of these sections is a sign-up form with fields for "Username", "E-Mail", and "Password", along with a "SIGN UP WITH facebook" button and a link to "OR SIGN UP WITH YOUR EMAIL". At the bottom, there is a call-to-action button labeled "OPEN YOUR SHOP" with a "FREE" badge. The footer contains links for "Blomming", "Legal", "Social", "Install the Blomming app", "Browsing language: English", and social media icons for Facebook, Twitter, and Google+. Logos for TechCrunch, WIRED, TNW, Gartner Cool Vendor, 24 DRE, and la Repubblica are also present.

A platform for embedding your e-commerce store in your own website.

Source: <http://blomming.com/>

# Ponoko (New Zealand)

The screenshot shows the Ponoko website homepage. At the top, the Ponoko logo is displayed with the tagline "the world's easiest making system". Below the logo is a navigation bar with links: home, buy, sell, make, apps, blog, and support. A decorative banner with red silhouettes of crabs and hearts runs across the top. The main headline reads "The future of products is here" followed by "Personal Factory™ 5". A sub-headline states "Now with App Gateway to create almost anything, and CNC routing to make big things." Below this, there are two buttons: "How it works »" and "Pricing from \$0 ». On the right side, a woman is sitting in a wooden armchair, writing in a notebook. In front of her is a small wooden table with a red glowing cube-shaped device, a smartphone, and a mouse. Four callout bubbles point to the device: one labeled "Electronics", one labeled "3D printing", one labeled "Laser cutting", and one labeled "CNC routing". At the bottom right of the page, there are navigation arrows.

Online service and marketplace (open your own shop) with laser cutting, cnc routing, 3D printing, electronic components through local hubs.

Source: <http://www.ponoko.com>

# Ponoko (New Zealand)

## Digital making hubs

Personal Factory connects you to a global, digital making network.

Current making hubs are listed below. Select a hub closest to where you live that offers the methods and materials you're looking for.

You will be taken to a page where you can sign up for a free Personal Factory account or login if you already have one.

Note: Digital making methods and material selections vary at each hub, because each one works with their own equipment and local material suppliers.

Location	Website	Methods	Materials
<b>United States</b>			
CA Oakland	Ponoko	3D printing CNC routing laser cutting	materials materials materials
GA Atlanta	Ponoko	CNC routing	materials
<b>New Zealand</b>			
Wellington	Ponoko	laser cutting	materials
<b>Germany</b>			
Berlin	Formulor	laser cutting	materials
<b>Italy</b>			
Milan	Vectorealism	laser cutting	materials
<b>United Kingdom</b>			
London	RazorLAB	laser cutting	materials

Online service and marketplace (open your own shop) with laser cutting, cnc routing, 3D printing, electronic components through local hubs.

Source: <http://blog.ponoko.com/digital-making-hubs/>

# Ponoko (New Zealand)

The screenshot shows the Ponoko website's developer program section. At the top, the Ponoko logo and tagline "the world's easiest making system" are visible, along with a navigation bar containing links for home, buy, sell, make, apps, blog, and support. A decorative banner with various 3D-printed objects like gears and hearts is displayed above the main content area.

## Apps

App Gateway Developer Program

### Personal Factory Developer Program

Build apps for Personal Factory and distribute them in the Personal Factory App Gateway

[Join now \(it's free\) »](#)

**Create an app**  
Get access to the Sandbox and Live APIs – and let us do the making for you. [Find out more »](#)

**Developer resources**  
Get API documentation, code samples and technical support. [Find out more »](#)

**Personal Factory App Gateway is coming soon!**  
Distribute your 'making apps' to the people who care the most.  
[Learn more »](#)

Online service and marketplace (open your own shop) with laser cutting, cnc routing, 3D printing, electronic components through local hubs.

Source: <http://www.ponoko.com/app-gateway/developer-program>

# Shapeways (Netherlands/USA)

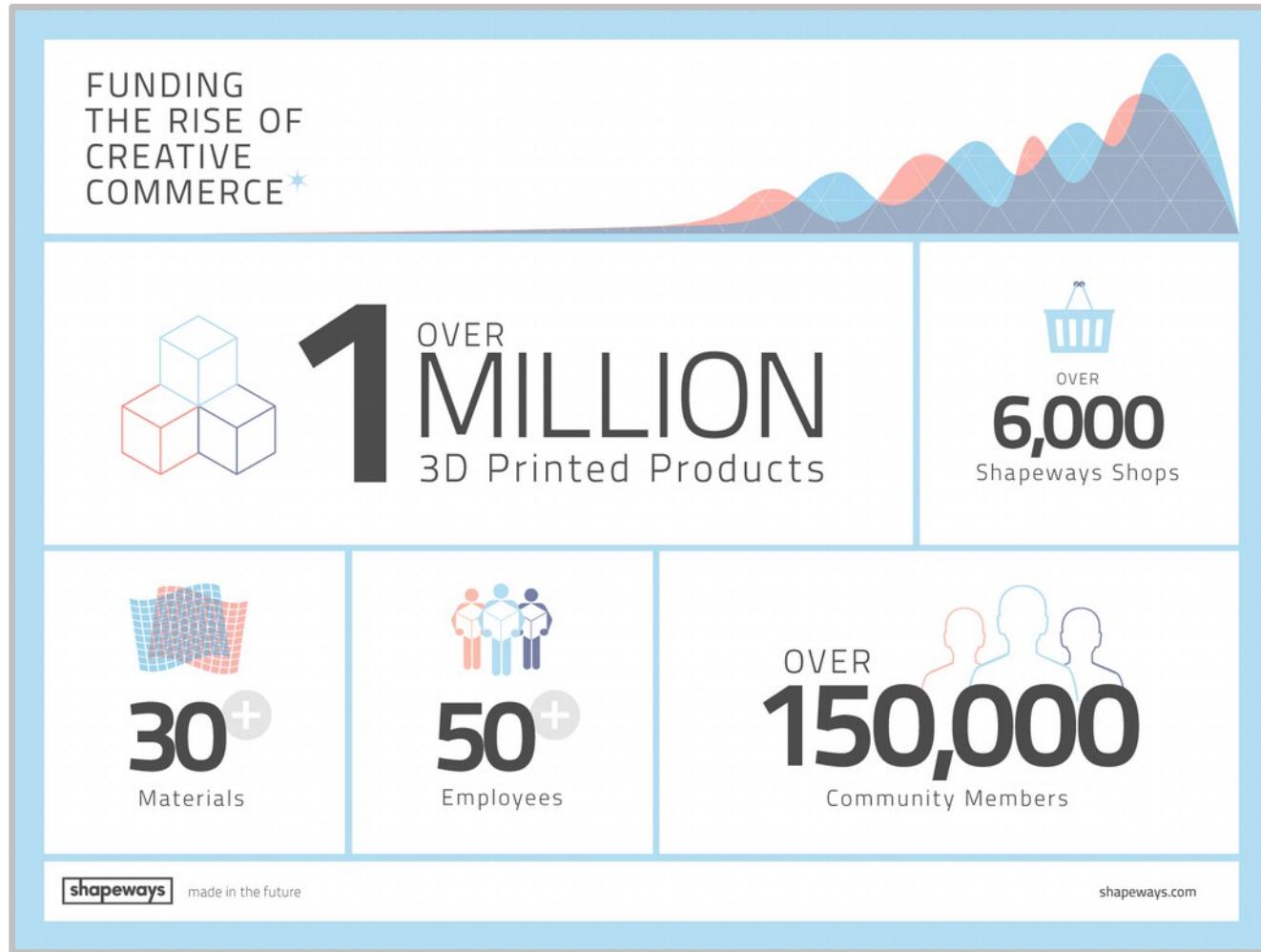
The screenshot shows the Shapeways homepage. At the top, there's a navigation bar with links for 'Create', 'Discover', 'Community', 'Go' (which is highlighted in blue), 'Cart', 'Register', and 'Log in'. Below the navigation is a large banner featuring a video thumbnail of a person holding a 3D-printed flower pot, with the text 'Shapeways 3D Printing & the Culture of Creativity' above it. To the right of the video, the tagline 'Make & Share Your Products With 3D Printing' is displayed in white text on a dark background, along with a 'Join Now!' button and a link to 'Upload now'. Below the banner, there's a section titled 'Discover 3D Printed Products' with four product cards:

- Animaris Geneticus Par...** by Theo Jansen (107 reviews, From: €90.73)
- Bicycle Chainring Cuffli...** by GothamSmith (75 reviews, From: €56.62)
- Klein Bottle Opener** by Bathsheba Sculpture LLC (18 reviews, From: €72.66)
- Moustache Cufflinks** by GothamSmith (11 reviews, From: €56.62)

Online service and marketplace (open your own shop) with 3D printing.

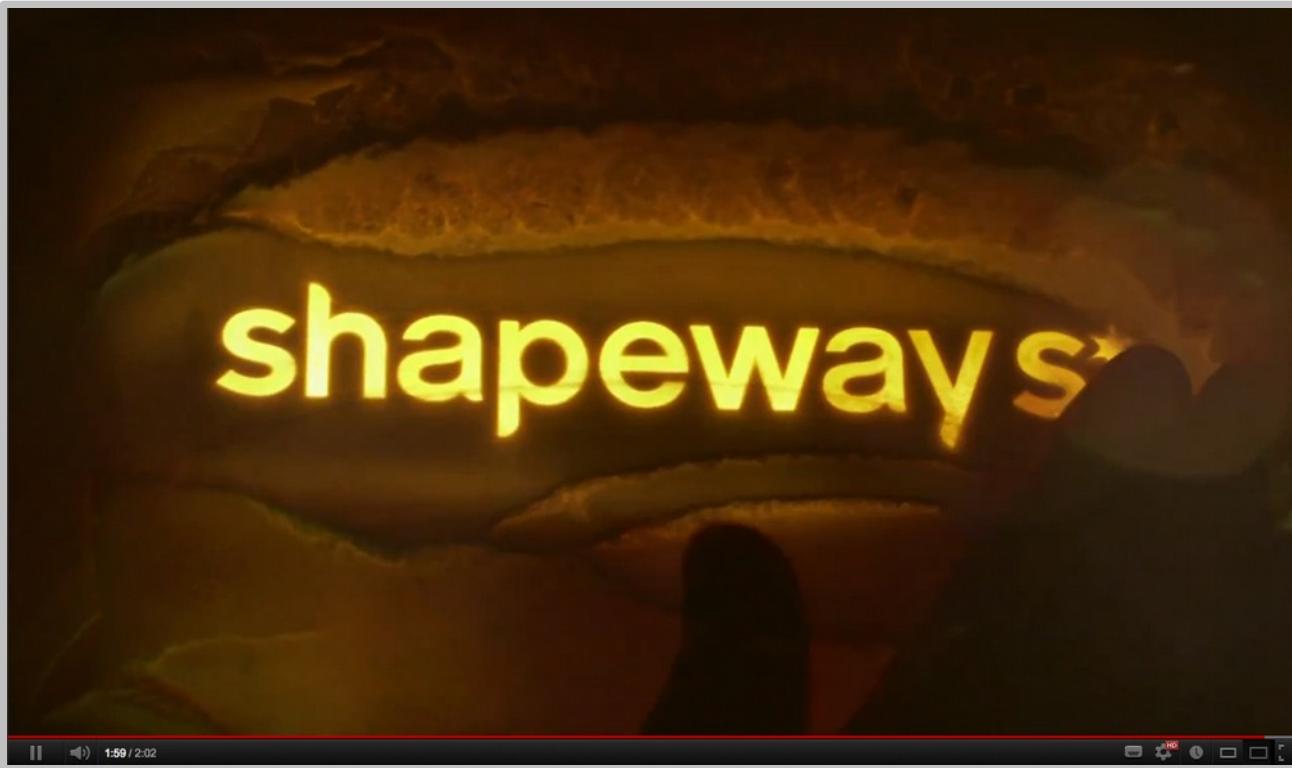
Source: <http://www.shapeways.com>

# Shapeways (Netherlands/USA)



Online service and marketplace (open your own shop) with 3D printing.

# Shapeways (Netherlands)



---

Online service and marketplace (open your own shop) with 3D printing.

Source: [http://www.youtube.com/watch?feature=player\\_embedded&v=qJuTM0Y7U1k](http://www.youtube.com/watch?feature=player_embedded&v=qJuTM0Y7U1k)

# i.materialise (Belgium)

The screenshot shows the homepage of i.materialise. At the top, the logo "i.materialise" is displayed in a blue, handwritten-style font. To its right is a navigation bar with links: Home, Creation corner, 3D print lab, Materials, Gallery, About us, and Blog. Below the navigation is a large banner featuring several 3D-printed objects made of metal, including a tall totem-like figure and a golden humanoid statue. The banner has a textured background and contains the text "got metal ?" in large, white, sans-serif letters. Below this, it says "Yes, we do!" followed by a list of materials: Titanium, Brass, Bronze, Stainless steel, Gold plated stainless steel, Silver and Gold. A small set of five dots serves as a navigation indicator below the banner.

WHAT CAN I DO HERE?

3D print your designs

Upload your 3D design and instantly see the price for your models. It's that easy.

- No login necessary
- Choose from a large selection of materials and colors
- Scale your model to the ideal size
- Order as many copies as you want

Sell your designs

Want to show off your design talent and make some money at the same time? Offer your designs for sale in our gallery and once a month, we will pay you a fee for every one of your items sold.

Online service and marketplace (open your own shop) with 3D printing.

Source: <http://i.materialise.com/>

# Sculpteo (France)

Sculpteo.com | Stores | Workshops | Blog | Professionals

English | Français | Login | Register

**sculpteo | 3D Printing**

Home Services Materials Support Cloud Engine App FAQ Upload a 3D file

## POLISHED PLASTIC IS COMING ON STAGE

Get another feeling on your creations!  
[Learn more on this material](#)



Innovative 3D printing service for creative people

**3D Print easily**  
Upload your 3D file and have it printed by Sculpteo.  
  
[Upload 3D file](#)

**Design at your fingertips**  
We develop online 3D tools and workshops to give you the best 3D printing results. Try them !  
  
[Create objects](#)

**Sell your creations**  
Open your store in our 3D printing marketplace. Sell your creations and get benefits.  
  
[Open your store](#)

**Get inspired**  
Browse our designers' collections, get inspired and have them 3D printed !  
  
[Visit Designers Stores](#)

**Get in touch**  
Keep in touch with Sculpteo with our monthly newsletter.  
Enter your email  [OK](#)

**PARTICULE<sup>14</sup>**  
PARTICULE 14 PROJECT FOR INTERNATIONAL DESIGN WEEK OF MILAN  
[Learn more](#)

**Follow us** 

**News**  
Sept. 5, 2012 How-To 3D Print Glasses  
Cordavi is a student at San Jose State University studying Digital Media Arts, and an avid user of T...

Online service and marketplace (open your own shop) with 3D printing.

# Inventables (USA)

**INVENTABLES®**  
The Hardware Store for Designers

Search by keyword or part number

## Sheet Materials

LASER CUTTING  
Accessories  
Acrylic Sheets  
Cuttable Sheets  
Laser Cutters  
Wood

INNOVATIVE MATERIALS  
3D Printer Filament  
Coatings  
Components  
Electrical & Light  
Magnets  
Molding Materials  
Unexpected Properties

RAW MATERIALS  
Films  
Foam  
Gel  
Glass  
Glow in the dark  
Metal  
Paper & Cardboard  
Pigments  
Plastic & Rubber  
Textiles, Thread & Yarn  
Wax  
Wood

HARDWARE  
Fasteners  
Tools

### Sheet Materials



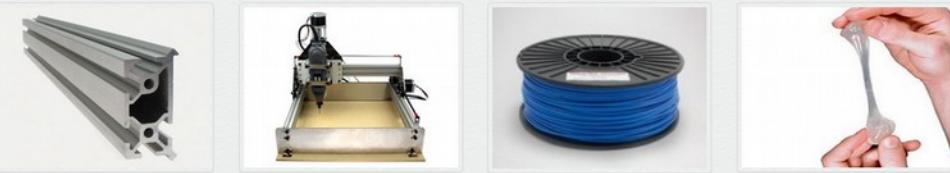
**Acrylic Sheets**  
Over 100 varieties of acrylic sheets in various colors, sizes, styles and textures.

**Wood Veneer**  
Thin veneers good for laminating and laser engraving

**Anodized Aluminum**  
10 colors good for laser engraving

**Cork Fabric and Sheet**  
4 paper thin cork patterns for cutting, gluing, and sewing

## Hardware and Materials for Desktop Fabrication



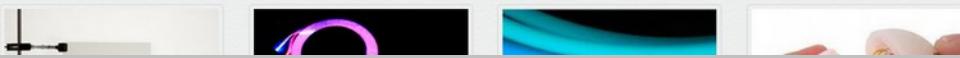
**MakerSlide Components**  
MakerSlide and Componentry for building machines

**Machines**  
Machines for making, Shapeoko CNC Mill, 3D Printer, Laser Cutter

**3D Printer Filament**  
8 colors of 1.75mm ABS and PVA filament

**Molding Materials**  
Plastic, rubber, and putties for molding

## Electrical & Light



Online store for materials, components and machines for digital fabrication and DIY.

Source: <https://www.inventables.com/>

# Adafruit (USA)

The screenshot shows the Adafruit website homepage. At the top, there's a navigation bar with links for HOME, BLOG, FORUMS, SUPPORT, TUTORIALS, CHAT, VIDEOS, CONTACT, JOBS, and ABOUT. A search bar with a 'GO' button is also present. The main content area features a large image of an Arduino board connected to an NFC/RFID shield, with a hand holding a small NFC tag near it. A callout box on the right side of the image reads 'NFC/RFID Shield for Arduino Touchless communication!' with a 'LEARN MORE' button. To the left of the main image, there's a sidebar titled 'PRODUCTS' with a 'New Products [121]' section. This section lists various product categories with their counts: Android (6), Arduino (53) with sub-categories Boards & Packs (12), Shields (30), Accessories (11), BoArduino (8), Brain Machine (1), AVR Development (8), BeagleBone (20), Bunnie Studios (8), mbed (10), PIC (2), Breakout Boards (20), Clocks & Watches (12), Discover Electronics (1), Drawdio (3), EggBot (1), FLORA (18), FPGA (1), Fuzebox (3), littleBits (1), Game of Life (2), Microtouch (5), MiniPOV (3), MintyBoost (2), NETduino (12), Power supply (9), Propeller (11), Raspberry Pi (37), SIM reader (4), Snap Circuits (4), SpokePOV (10), TV-B-Gone (4), Tweet-a-Watt (5), XBee (10), Project packs (9), and RFID / NFC (12). Below this list are two buttons: '\$17.50 LEARN MORE' for the Drawdio kit and '\$85.00 LEARN MORE' for the Adafruit ARDX - v1.3 Experimentation Kit for Arduino (Uno R3). Further down, there's another button for the XBee Adapter kit at '\$10.00 LEARN MORE'. At the bottom of the page, there's a footer bar with a red background and white text that reads 'Online store of Open Hardware projects and electronic components.'

Source: <http://www.adafruit.com/>

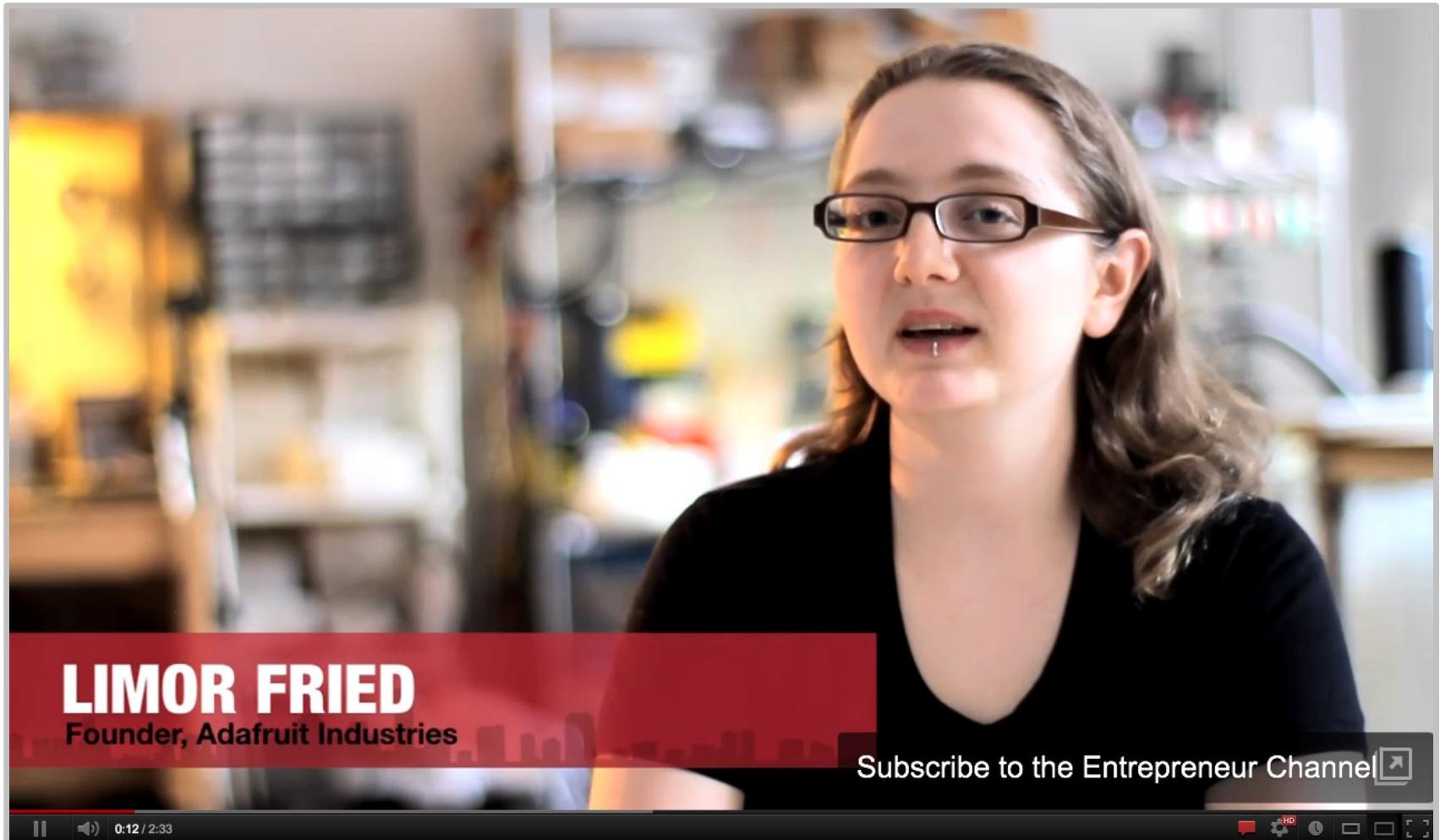
# Adafruit (USA)



Online store of Open Hardware projects and electronic components.

Source: <http://www.youtube.com/user/adafruit>

# Adafruit (USA)



Online store of Open Hardware projects and electronic components.

Source: <http://www.youtube.com/watch?v=qpYdt4hdEi8>

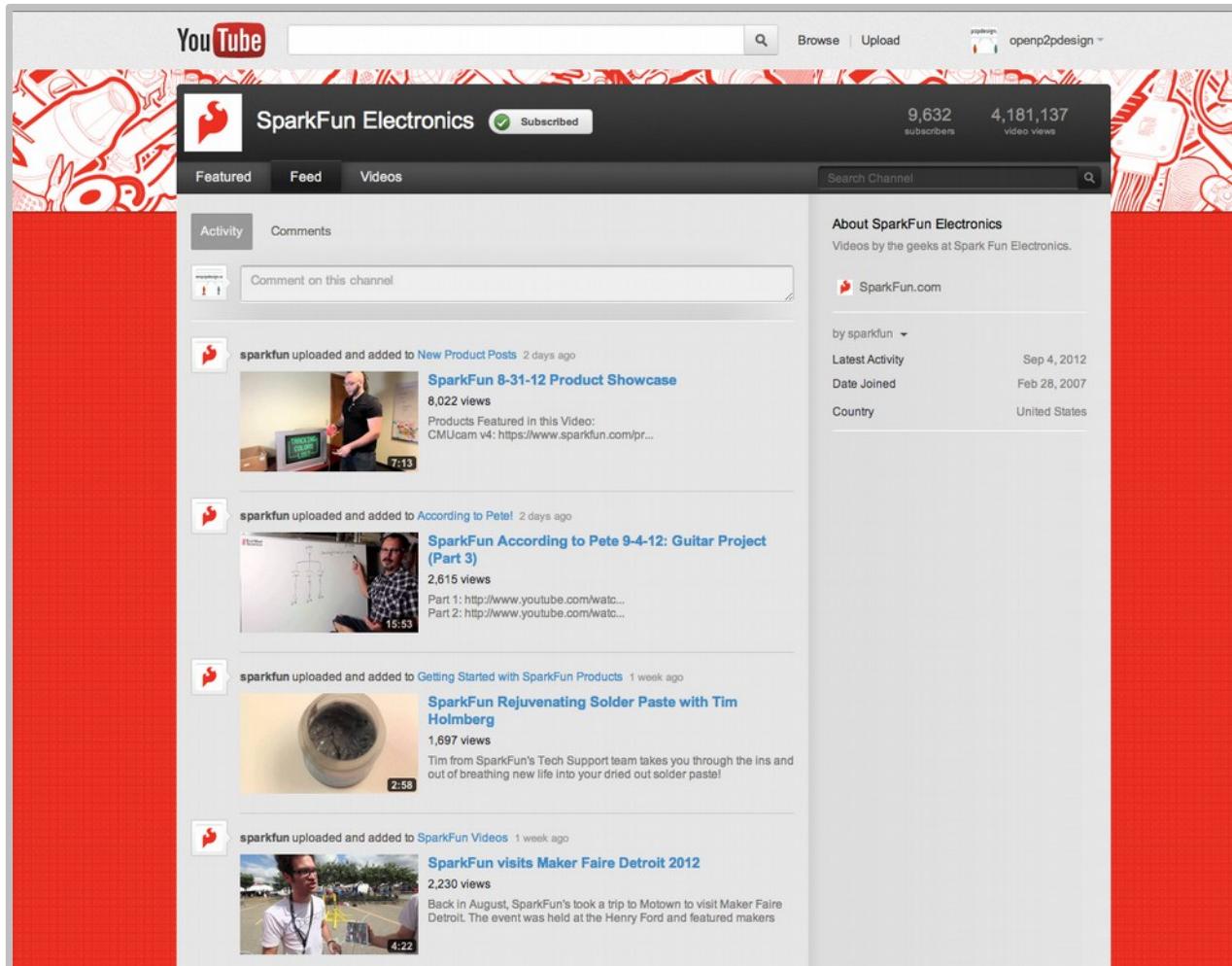
# Sparkfun (USA)

The screenshot shows the Sparkfun Electronics website. At the top, there's a navigation bar with links for Products, Support, Tutorials, Distributors, About Us, Contact, and a search bar. The main content area features a banner for 'SPARKFUN APPROVED KICKSTARTERS' with a large red letter 'K'. To the left, a sidebar titled 'Categories' lists various product categories like New Products, Top Sellers, Featured Products, Gift Certificates, Classes & Events, Books, Breakout Boards, Cables, Cellular, Components, Development Tools, Dings and Dents, E-Textiles, Educators, GPS, Kits, LCDs, Port-O-Rotary, Programmers, Prototyping, Retail, Retired, Robotics, Sale, Sensors, Swag, Tools, Widgets, and Wireless. The central part of the page has a 'Latest News' section with a post about 'AVC 2013 - The Next Chapter' by Robert C. dated September 06, 2012. Below the news is a photograph of a person in a blue shirt standing on a paved surface with yellow diagonal lines, holding a camera and pointing it at a small quadcopter drone on the ground. To the right, there are sections for 'New Products' (listing an RGB LED Strip, LilyPad LED Purple, and Hook-Up Wire Assortment), 'Featured Products' (listing SparkFun Projects Case, LED - RGB Diffused Common Cathode, and Hackerspace Passport), and a 'What is BatchPCB?' section.

Online store of Open Hardware projects and electronic components.

Source: <http://www.youtube.com/user/adafruit>

# Sparkfun (USA)



Online store of Open Hardware projects and electronic components.

Source: [http://www.youtube.com/user/sparkfun?feature=results\\_main](http://www.youtube.com/user/sparkfun?feature=results_main)

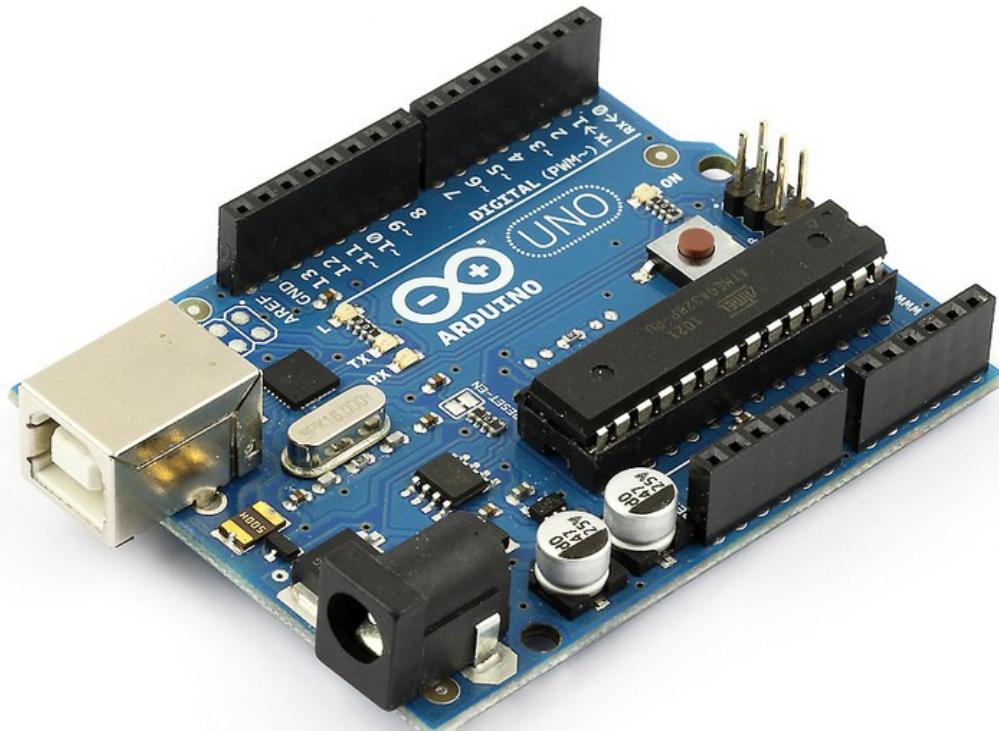
# Sparkfun (USA)



Online store of Open Hardware projects and electronic components.

Source: <http://youtu.be/dvvtRoBn4YM>

# A physical platform: Arduino (Italy)



An Open single-board microcontroller and IDE designed to make the process of using electronics in multidisciplinary projects more accessible.

Source: <http://arduino.cc>

# A physical platform: Arduino (Italy)



Queríamos una herramienta  
para nuestros estudiantes,

An Open single-board microcontroller and IDE designed to make the process of using electronics in multidisciplinary projects more accessible.

Source: <http://www.youtube.com/watch?v=q2dieLFR9C8> Full documentary: <http://vimeo.com/18539129>

# Crowdfunding: Kickstarter

What is Kickstarter? We're the world's largest funding platform for creative projects.

**KICKSTARTER** Discover great projects Start your project Search projects BLOG HELP SIGN UP LOG IN

like you!

## We help people fund creative projects.

Kickstarter is the world's largest funding platform for creative projects. Every week, tens of thousands of amazing people pledge millions of dollars to projects from the worlds of music, film, art, technology, design, food, publishing and other creative fields.

**PLAY**

Each and every Kickstarter project is the independent creation of someone like you!

**START YOUR PROJECT**

[Find out how to make an awesome Kickstarter project](#)

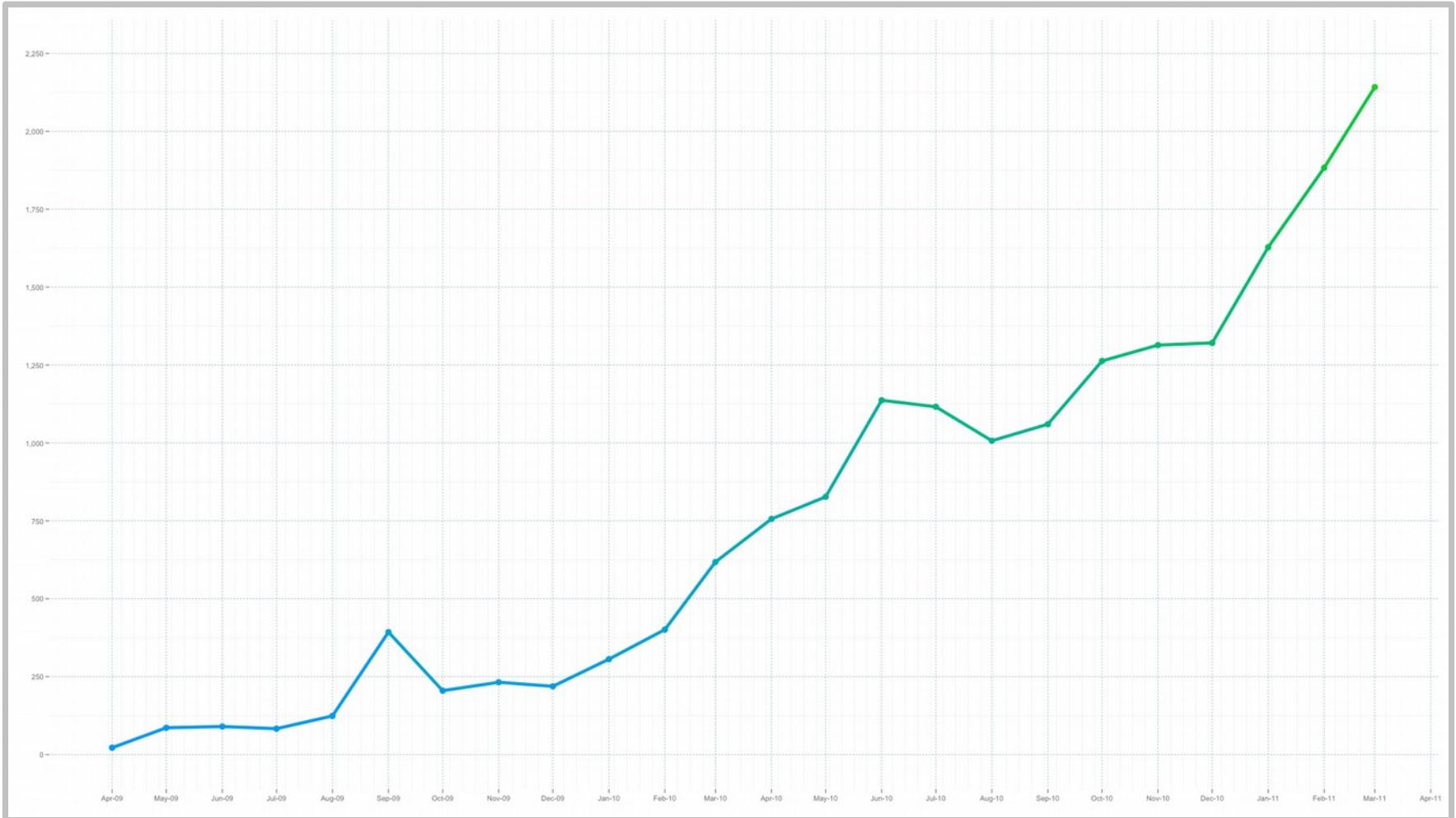
### HOW KICKSTARTER WORKS

<b>Our Simple Formula</b> Kickstarter is a new form of commerce and patronage. In our world, the best way to inspire support is to offer people great rewards. Everyone loves limited editions, one-of-a-kinds, and fun experiences (parties, screenings, balloon rides!). Spend some time brainstorming your rewards and people will respond. No one needs another coffee mug.	<b>Creative projects only</b> Kickstarter cannot be used to fund for charity projects or causes. While there are countless causes worthy of support, we believe that creativity deserves its own space. <a href="#">See our guidelines</a> for more.	<i>“...an unexpected influence on indie culture, a new model for a D.I.Y. generation.”</i> <b>The New York Times</b>
<b>Where does the money come from?</b> Each month millions of people visit	<b>My ideas aren't “big and important.” Is Kickstarter for me?</b> Absolutely! Kickstarter is for creative projects big and small, serious and whimsical, traditional and	

Kickstarter is the world's largest funding platform for creative projects.

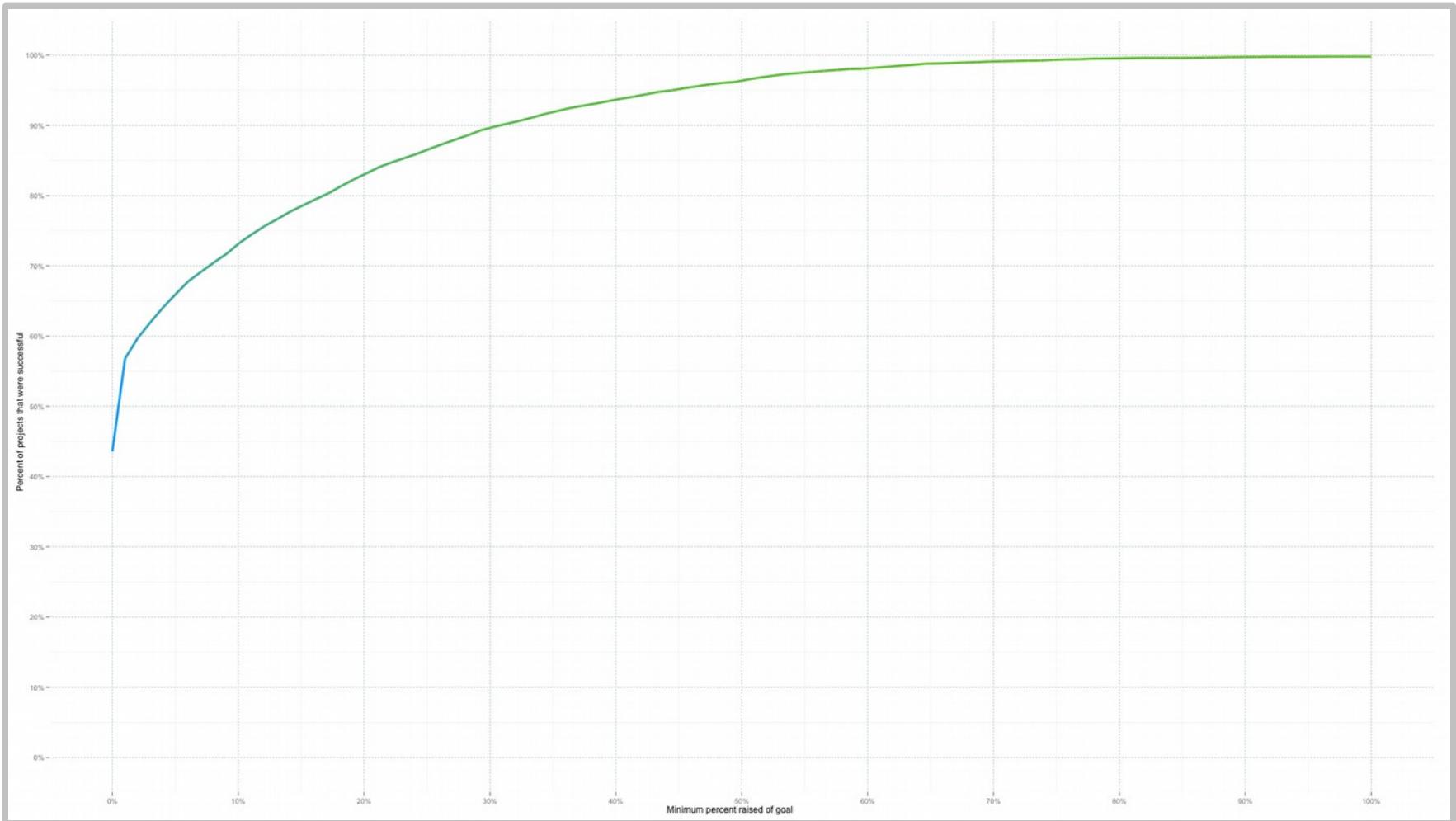
Source: <http://www.kickstarter.com/start>

# Crowdfunding: Kickstarter



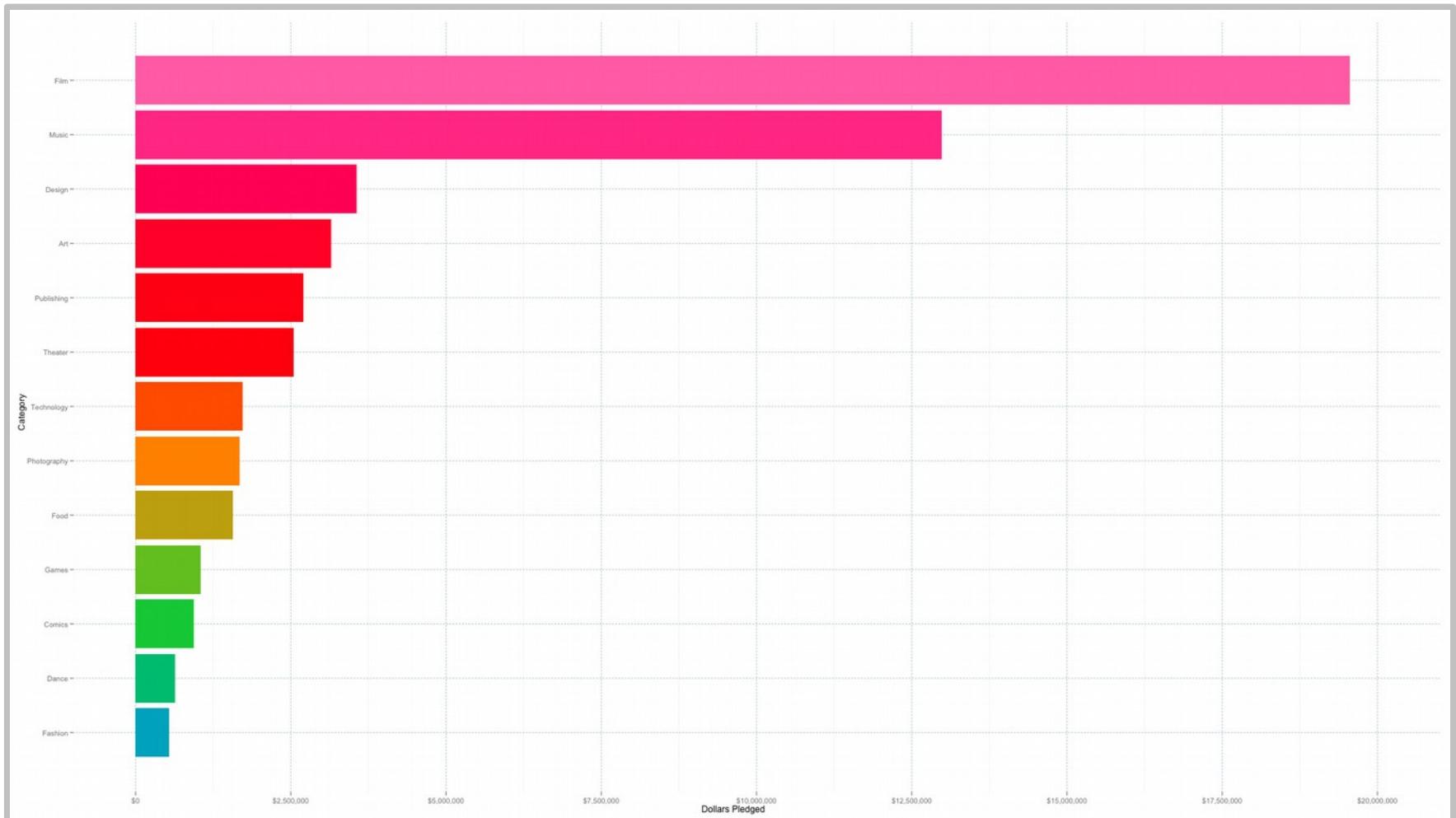
Projects launched: activity between April 28, 2009 - April 27, 2011.

# Crowdfunding: Kickstarter



Projects that reach 30% of their funding goal succeed more than 90% of the time.  
As the line turns green, the percent of projects that succeed approaches 100%.

# Crowdfunding: Kickstarter



Film leads the pack with nearly \$20 million in pledges and Music follows with more than \$13 million. 10 of the 13 categories have seen more than \$1 million.

# Kicktraq: analytics for Kickstarter



Kickstarter is the world's largest funding platform for creative projects.

Source: <http://www.kicktraq.com/> <http://www.kicktraq.com/projects/2105227104/ultra-bot-3d-printer/>

# Kickstarter: is it rather a Medium?

FAST COMPANY

SUBSCRIBE | NEWSLETTER | SEARCH

MORE THAN **200** DESTINATIONS

Co.DESIGN Co.CREATE Co.EXIST Co.LEAD TECHNOLOGY

## Kickstarter: Crowdfunding Platform Or Reality Show?

BY IAN BOGOST | JULY 18, 2012

It's QVC for the web generation, the new Thunderdome, Off Track Betting for ideas addicts. Whatever you call it, Kickstarter's becoming less about funding widgets than pouring gas on creative sparks just to watch them ignite.



On Kickstarter, we sell / fund more an experience than a product!

# Lessons from / for Kickstarter

- \* **Design for Simplicity:** reduce the functionalities / components
- \* **Design for scale:** identify your possible supply chain and plan how to scale the production
- \* **Treat it like a job:** it requires full time energy, and probably also a team work
- \* **Befriend fellow hackers:** develop the project in hackerspaces or fablabs
- \* **Leverage your backers:** use them not just for collecting money!

---

Some lessons from successful projects... “design for manufacturing”

# Lessons from / for Kickstarter

- \* **Set a spot-on funding goal – not too big, not too small:** set your Kickstarter goal near \$10,000: 38% of projects met their goals
- \* **Don't take too long to raise your money:** The average Kickstarter campaign lasts for 30 days, with 35% of success
- \* **Produce a slick video to get attention:** The nearly foolproof way to raise money on Kickstarter is to get the attention of the crowdfunding site's staff (89% success)
- \* **Make at least 1,000 Facebook friends:** Founders with 1,000 Facebook friends or more can have a success up to 40%

---

Some lessons from successful projects...

# Crowdfunding: Indiegogo

The screenshot shows the Indiegogo homepage with a dark header bar. On the left is the Indiegogo logo, followed by navigation links: browse, learn, create, Sign Up, Log In, and a search bar. Below the header, a tagline reads "The world's funding platform. Go fund yourself." A large image of a geodesic dome under construction is the main visual element. Below it, a campaign card for "New Alexandrian Library Project For Esoteric ..." shows "\$12,855 raised" and "4 days left". To the right of the main content are three buttons: "BROWSE CAMPAIGNS" (with a magnifying glass icon), "LEARN HOW IT WORKS" (with a document icon), and "CREATE A CAMPAIGN" (with a lightbulb icon). Below the main image, a "Final Countdown" section displays four campaign cards:

- Mountain Rider Alliance** (SMALL BUSINESS): Support the Future of Skiing. by Mountain Rider's Alliance. We are a grassroots organization committed to making a positive difference in the sport we... 72% funded, \$7,230 raised, 45 hours left.
- Goodbye Promise** (FILM): 30 Days To One Million - The Worldwide Release of Goodbye Promise. by Karen Worden & David Brann. Be a part of the first ever feature film distributed ... 0% funded, \$2,338 raised, 5 days left.
- #StopMonsanto** (ENVIRONMENT): StopMonsanto Film Project. by Stop Monsanto. #stopmonsanto is a film about five young activists who get fed up with Monsanto's actions and... 25% funded, \$37,404 raised, 8 days left.
- Greebo: Nippo Goblin and Turtles** (GAMING): Greebo: Nippo Goblin and Turtles. by Greebo miniatures. Our goal is creating a full Nippo Goblin team for Fantasy Football. 186% funded, \$7,426 raised, 4 days left.

A crowdfunding platform based in California, it has hosted over 100,000 funding campaigns in areas such as music, charity, small business and film.

Source: <http://www.indiegogo.com/>

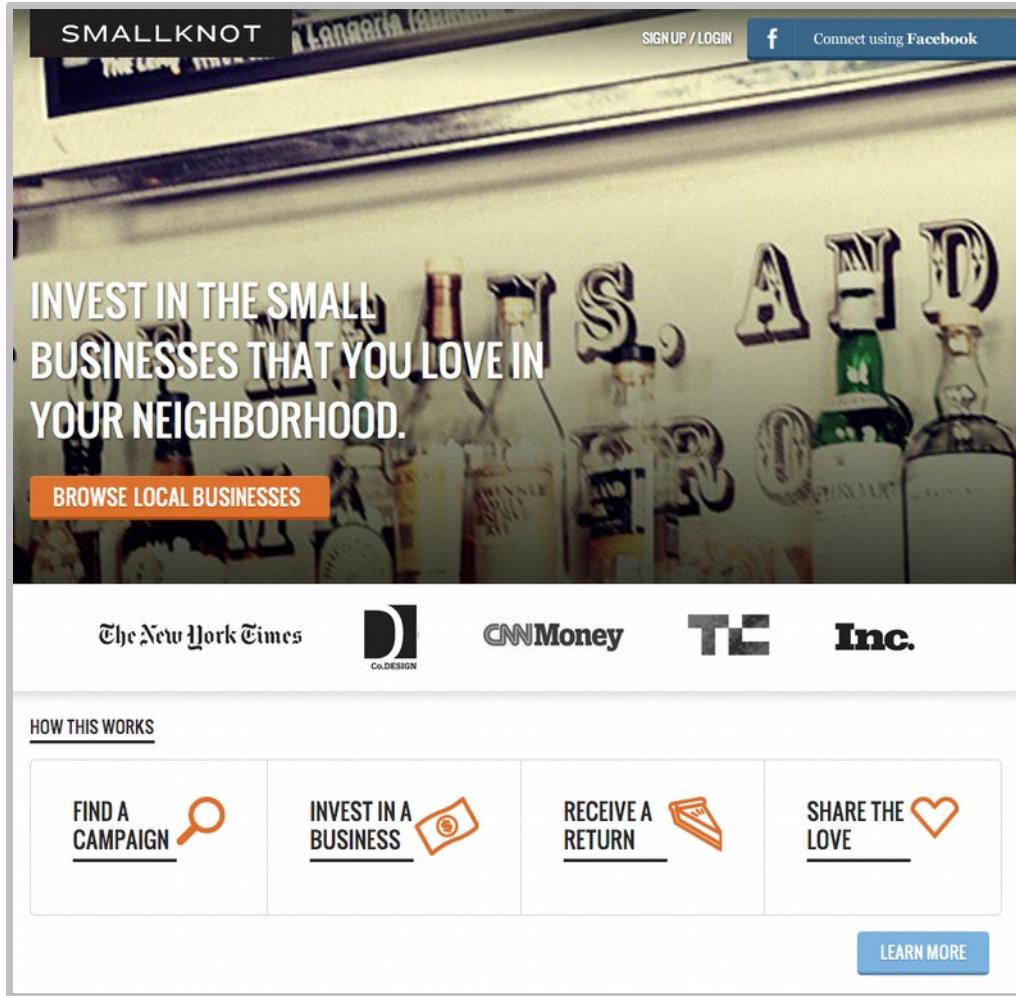
# Crowdfunding for Open projects: Goteo

The screenshot shows the Goteo website interface. At the top, there's a navigation bar with links for 'ABOUT GOTEZO', 'BLOG', 'FAQ', and 'ENG'. Below the header, a large banner for a project titled 'SMART CITIZEN - SENSORES CIUDADANOS' by 'Fab Lab Barcelona' is displayed, showing it has reached 100% of its goal of 12,778 € over 12 days. A prominent 'OPEN 100% OPEN' button is on the right. Below the banner, a section titled 'HIGHLIGHTED' features three projects: 'PERIODISMO DE DATOS' (Technological, Communications), 'CIUDAD INTELIGENTE' (Social, Technological), and 'RECETAS ECO' (Social, Educational). Further down, another section shows three more projects: 'ESPAÑA EN LLAMAS' (Technological, Communications), 'SMART CITIZEN - SENSORES CIUDADANOS' (Social, Technological), and 'BIONÉCTAR' (Social, Educational). Each project card includes a progress bar, remaining time, and benefit icons.

Project Category	Project Name	By	Co-financing Minimum	Co-financing Optimum	Remaining
Technological, Communications	PERIODISMO DE DATOS		4.650 €	9.040 €	14 days
	ESPAÑA EN LLAMAS	Fundación Ciudadana Cívico	4.650 €	9.040 €	14 days
Social, Technological	SMART CITIZEN - SENSORES CIUDADANOS	Fab Lab Barcelona	8.938 €	19.511 €	12 days
	BIONÉCTAR	evaroca	5.697 €	7.823 €	29 days

A crowdfunding platform for Open Projects, not just involving money but also time, participation and involvement from users.

# Crowdfunding for local business: Smallknot



A new trend in crowdfunding: fund local projects and business to strengthen your local community.

Source: <http://www.smallknot.com/>

# Crowdfunding for local business: LuckyAnt

The screenshot shows the homepage of the LuckyAnt website. At the top, there's a red header bar with social sharing icons (Facebook, Twitter, LinkedIn) and links for "LOGIN" and "SIGNUP". Below the header is the "LUCKY ANT" logo, which includes a stylized ant icon. A video player titled "How Lucky Ant Works" is centered, showing a cartoon city street scene with buildings, trees, and a road sign that says "NO STOPPING ANYTIME". Below the video, a subtitle reads: "Lucky Ant helps local businesses get funds to grow by turning to you, their customers, for help." There are three input fields: "Your Email (optional)", "Brooklyn", and "Clinton Hill - Fort Greene", followed by a red "ENTER" button. At the bottom, there are three numbered steps: 1. Check out the project., 2. Chip In., and 3. Get Rewarded! Each step has a brief description.

SHARE f t in

LOGIN | SIGNUP

LUCKY ANT

How Lucky Ant Works

ONE WAY

W 45 ST

NO STOPPING ANYTIME

00:59

||||| HD :: vimeo

Lucky Ant helps local businesses get funds to grow by turning to you, their customers, for help.

Your Email (optional)

Brooklyn

Clinton Hill - Fort Greene

ENTER

1. Check out the project.  
Every week we bring you a project from a business in your neighborhood that needs to be funded.

2. Chip In.  
When you see something you like, you can pledge money. Once the business reaches their goal, they will use that money to complete their project. We don't charge your card unless the business reaches its goal.

3. Get Rewarded!  
You get rewards and perks from the business that you invested in like free stuff, behind the scenes access, and VIP treatment! You also get the satisfaction of having invested in your neighborhood!

A new trend in crowdfunding: fund local projects and business to strengthen your local community.

Source: <http://www.luckyant.com/>

# Crowdfunding for local business: Brickstarter

**BRICK  
STARTER**

BRICKSTARTER

- An Introduction
- Background
- Contact

 57

 41

## An Introduction

Tietoa projektista suomeksi löytyy [tämän linkin](#) takaa. Tulevaisuudessa pyrimme toteuttamaan projektiin kaksikielisenä – kiitos käräsvällisyystä.

Brickstarter is about 21st century social services. We are sketching a system that would enable everyday people, using everyday technology and culture, to articulate and progress sustainable ideas about their community. The Brickstarter project explores the ideas behind these systems, and will provide the blueprints for a platform that can turn possibilities into proposals into projects. By creating its prototype, we aim to stimulate more productive debates about 21st century governance and local decision-making.



This blog captures our evolving knowledge of 21st century decision making as we develop the Brickstarter concept.

A new trend in crowdfunding: fund local projects and business to strengthen your local community. This is a Finnish example under development.

# Crowdfunding for Finland: Mesenaatti.me

mesenaatti.me a better tomorrow!

**me  
se  
naatti  
.me**

create,  
fund  
and  
enable!

[suomeksi](#) | [in english](#) | [på svenska](#)

[ABOUT US](#)  
[CREATE or FUND](#)  
[TO JOIN](#)  
[BECOME INVOLVED](#)  
[FOLLOW US](#)  
[MORE INFO](#)

**Mesenaatti.me is the first open-for-everyone Finnish crowdfunding platform.**

**You don't have to be rich to make an impact: for only 10€ you can become a patron.**

Mesenaatti.me enables you to join in funding projects that matter to you. Support your favorite artist's new project, participate in your neighborhood park renovation or an afternoon club for school children. Fund a movie or a book. You can also invest in an innovation business or participate in starting a new bakery in your village.

Mesenaatti.me also opens up new opportunities for creatives. By presenting your idea for the public you can raise funding from those who wish to see it realized. This simple tool is ideal for funding art, culture, innovation and social projects. It enables totally new kind of activity & economy in which anyone with a great project may raise funding.

Mesenaatti.me is the first open-for-everyone Finnish crowdfunding platform.

# GitHub: coding for the social networks

The screenshot shows the GitHub homepage. At the top, it displays "2,110,447 people hosting over 3,683,591 repositories". Below this, there's a search bar with the placeholder "Find any repository" and a list of popular companies using GitHub: Facebook, Twitter, Microsoft, VMware, Redhat, LinkedIn, and Mozilla. The main content area is divided into two sections: "git /'git/'" and "git·hub /'git,həb/'. The "git" section describes Git as an extremely fast, efficient, distributed version control system ideal for collaborative development. The "git·hub" section describes GitHub as the best way to collaborate with others, mentioning forks, pull requests, and managing public and private repositories. A central button reads "Plans, Pricing and Signup" with the subtext "Unlimited public repositories are free!". Below this, a horizontal line of text lists various features: "Free public repositories, collaborator management, issue tracking, wikis, downloads, code review, graphs and much more...". At the bottom, four sections are listed: "Team management", "Code review", "Reliable code hosting", and "Open source collaboration", each with a brief description and a "More about" link.

github

Signup and Pricing Explore GitHub Features Blog Sign in

2,110,447 people hosting over 3,683,591 repositories

jQuery, reddit, Sparkle, curl, Ruby on Rails, node.js, ClickToFlash, Erlang/OTP, CakePHP, Redis, and many more

Find any repository

facebook. Microsoft VMware redhat. mozilla

git /'git/'

Git is an extremely fast, efficient, distributed version control system ideal for the collaborative development of software.

git·hub /'git,həb/

GitHub is the best way to collaborate with others. Fork, send pull requests and manage all your **public** and **private** git repositories.

Plans, Pricing and Signup

Unlimited public repositories are free!

Free public repositories, collaborator management, issue tracking, wikis, downloads, code review, graphs and much more...

**Team management**

30 seconds to give people access to code. No SSH key required. Activity feeds keep you updated on progress.

[More about collaboration](#)

**Code review**

Comment on changes, track issues, compare branches, send pull requests and merge forks.

[More about code review](#)

**Reliable code hosting**

We spend all day and night making sure your repositories are **secure**, **backed up** and **always available**.

[More about code hosting](#)

**Open source collaboration**

Participate in the most important open source community in the world today—online or at one of our meetups.

[More about our community](#)

The most popular platform for code development, and especially open source: a personal open source place + social network.

Source: <https://github.com/>

# Sourceforge: coding for the organization

The screenshot shows the SourceForge homepage. At the top, there's a navigation bar with links for 'Search', 'Browse', 'Blog', 'Help', 'Log In', and 'Join'. Below the navigation is a banner with the text 'Find, Create, and Publish Open Source software for free' and a search bar. The main content area features several advertisements: one for 'Go Parallel' (Translating Multicore Power into Application Performance) involving Intel and Geeknet; another for 'Earn More on Android' with statistics like 50,000 Developers, \$10+ CPM's, and 95%+ Fill Rates, accompanied by a green Android robot icon and the airpush logo. On the left, there's a sidebar with categories like 'Audio & Video', 'Business & Enterprise', 'Communications', 'Development', 'Home & Education', 'Games', 'Graphics', 'Science & Engineering', 'Security & Utilities', and 'System Administration'. The main content area also displays the 'Project of the Month' section, which includes projects like PeaZip, StarUML, AkelPad, FreeCAD, and Lazarus, each with a thumbnail, project description, and a 'Download' button.

The most popular platform for open source projects with 3.4 million developers that create over 324,000 projects: coding for an organization.

# GitHub as a platform: Gittip

The screenshot shows the Gittip homepage. At the top left is the Gittip logo with a heart icon. To its right is a "Sign in using GitHub" button. Below the logo is a sub-header "Personal Funding". A banner below the header reads "Set up recurring gift tips to people who make the world better. [Learn more ...](#)". The main content area starts with a section titled "Tip someone!" which includes a search bar for GitHub usernames and a "Go" button. Below this is a "Leaderboard" section with a link to "Unclaimed". The page is divided into two main columns: "Top Givers" and "Top Receivers", each listing 10 users with their tip amounts. A note at the bottom states: "Gittip happens every Thursday. The amounts above are what the Gittip community is willing to give as a weekly gift to each person, but only if the person accepts it. Gittip is **opt-in**. We never collect money on a person's behalf until that person opts in by claiming their account."

Rank	Amount	User
1.	\$ 83.00	anonymous
2.	\$ 68.41	<a href="#">whit537</a>
3.	\$ 68.00	<a href="#">martindale</a>
4.	\$ 67.00	<a href="#">bruceadams</a>
5.	\$ 66.00	<a href="#">campadrenalin</a>
6.	\$ 50.00	<a href="#">mtamizi</a>
7.	\$ 45.00	<a href="#">joetyson</a>
8.	\$ 36.00	<a href="#">workforpie</a>
9.	\$ 33.25	<a href="#">wraithan</a>
10.	\$ 25.00	anonymous

Rank	Amount	User
1.	\$ 169.80	<a href="#">whit537</a>
2.	\$ 71.39	<a href="#">jnoller</a>
3.	\$ 58.63	<a href="#">alex</a>
4.	\$ 56.79	<a href="#">mitsuhiko</a>
5.	\$ 47.87	<a href="#">kennethreitz</a>
6.	\$ 46.48	<a href="#">steveklabnik</a>
7.	\$ 37.50	<a href="#">zzzeek</a>
8.	\$ 31.74	<a href="#">visionmedia</a>
9.	\$ 30.32	<a href="#">antirez</a>
10.	\$ 29.57	<a href="#">jezdez</a>

A web service built on top of GitHub, it enables users to thank / give money to their favourite developers / projects.

Source: <https://www.gittip.com/>

# GitHub: Goteo as open source Crowdfunding

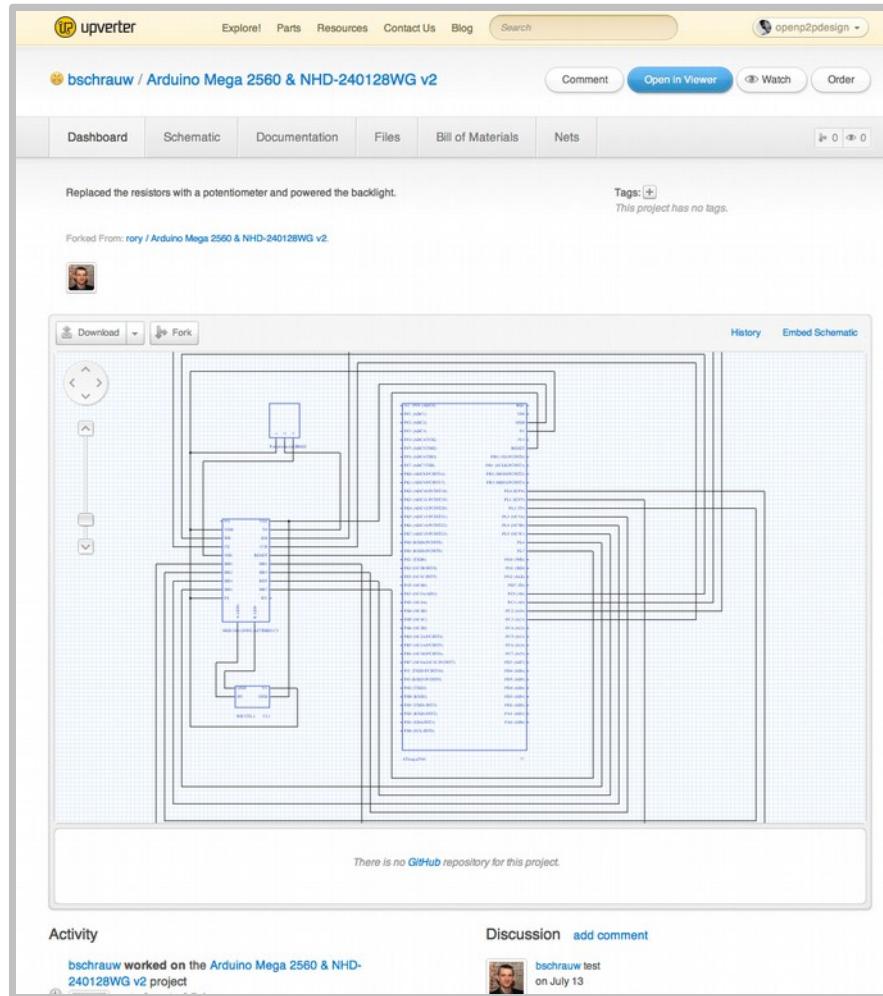
The screenshot shows the GitHub repository page for 'Goteo / Goteo'. The repository is public and has 8 issues and 3 forks. The 'Code' tab is selected, showing a note about the code being released under the terms of goteo.org. Below the code area, there's a 'Files' section listing various files and their last commit details. A specific commit from 'Goteo' is highlighted, dated a month ago, with a commit message about a script being up-to-date.

name	age	message
controller	3 months ago	Controllers [Goteo]
core	3 months ago	The core files [Goteo]
data	3 months ago	Default images [Goteo]
db	a month ago	Script with texts and translations up to date. Not included in goteo.... [Goteo]
doc	2 months ago	A brief installation guide [Goteo]
library	3 months ago	Various code libraries [Goteo]
logs	3 months ago	The main files: dispatcher, config, htaccess and logs folder [Goteo]
model	3 months ago	Models [Goteo]
view	3 months ago	Views: html, css, js and assets [Goteo]
.htaccess	3 months ago	The main files: dispatcher, config, htaccess and logs folder [Goteo]

The crowdfunding platform for Open projects  
is itself an open project!

Source: <https://github.com/Goteo/Goteo>

# Upverter: design hardware, with GitHub



Upverter is a design and collaboration platform for students, engineers, designers, makers and hackers for making hardware online.

Source: <http://upverter.com>



Aalto University  
Media Factory

03.

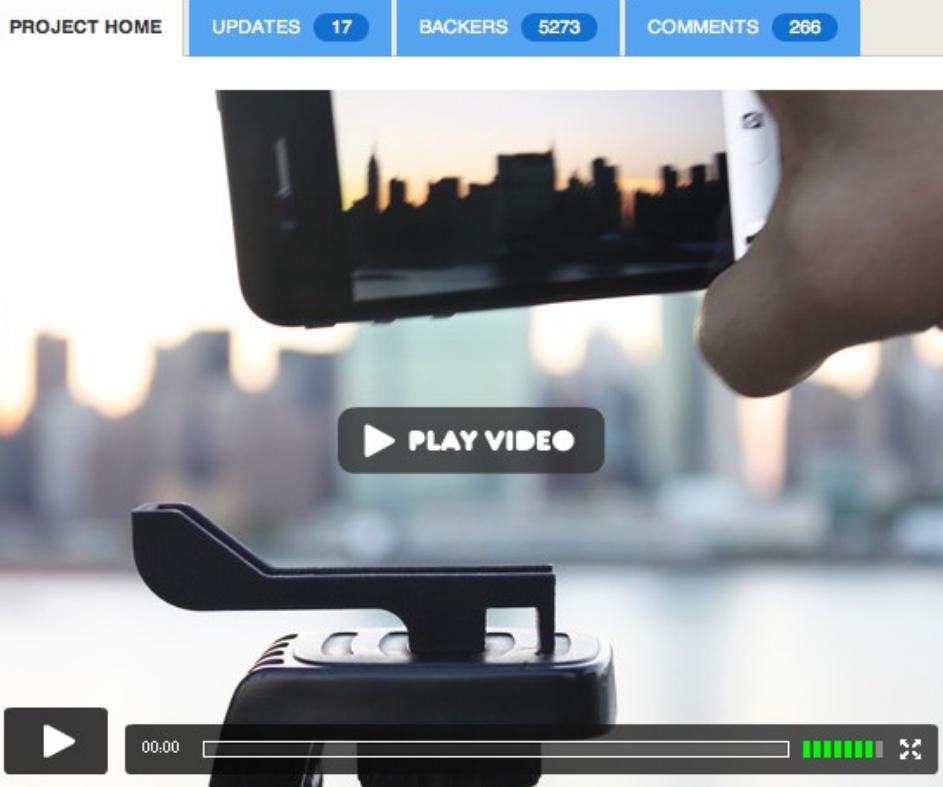
# The business of Digital Fabrication, Open Design and DIY

# And designers can be entrepreneurs

## Glif - iPhone 4 Tripod Mount & Stand

Project by Dan Provost & Tom Gerhardt • [send message](#)

1



New platforms for crowdsourcing allow you to fund your projects, and digital fabrication and FabLabs could be useful for manufacturing them.

Source: <http://www.kickstarter.com/projects/danprovost/glif-iphone-4-tripod-mount-and-stand>

# And designers can be entrepreneurs

## TikTok+LunaTik Multi-Touch Watch Kits

Project by Scott Wilson • [send message](#)

PROJECT HOME    UPDATES 39    BACKERS 13512    COMMENTS 4140



**13,512**  
BACKERS  
**\$941,718**  
PLEDGED OF \$15,000 GOAL  
**0**  
SECONDS TO GO

**FUNDING SUCCESSFUL**  
This project successfully raised its funding goal on ✓ December 16.

New platforms for crowdsourcing allow you to fund your projects, and digital fabrication and FabLabs could be useful for manufacturing them.

Source: <http://www.kickstarter.com/projects/1104350651/tiktok-lunatik-multi-touch-watch-kits>

# But “Open” alone is not enough

## 100K Stray Toasted Pull Toys

Project by C. Sven Johnson • [send message](#)

PROJECT HOME   UPDATES 2   BACKERS 13   COMMENTS 2



100K Stray Toasted Pull Toys

13

BACKERS

\$765

PLEDGED OF \$7,500 GOAL

0

SECONDS TO GO

FUNDING UNSUCCESSFUL

This project reached the deadline without achieving its funding goal on November 1, 2009.



PLEDGE \$5 OR MORE

Open Source is a good strategy, but your project needs to be meaningful for enough people!

Source: <http://www.kickstarter.com/projects/1833785894/100k-stray-toasthed-pull-toys>

# You need to interact with the market

**threadless Tees** Shop ▾ Participate ▾ Community ▾ Info ▾

**\$10,000!**  
Submit your idea for a chance at 10K! ▶ Score 300 designs fo LEARN MORE ▾

---

Good Shirts      Shop Guys | Shop Girly

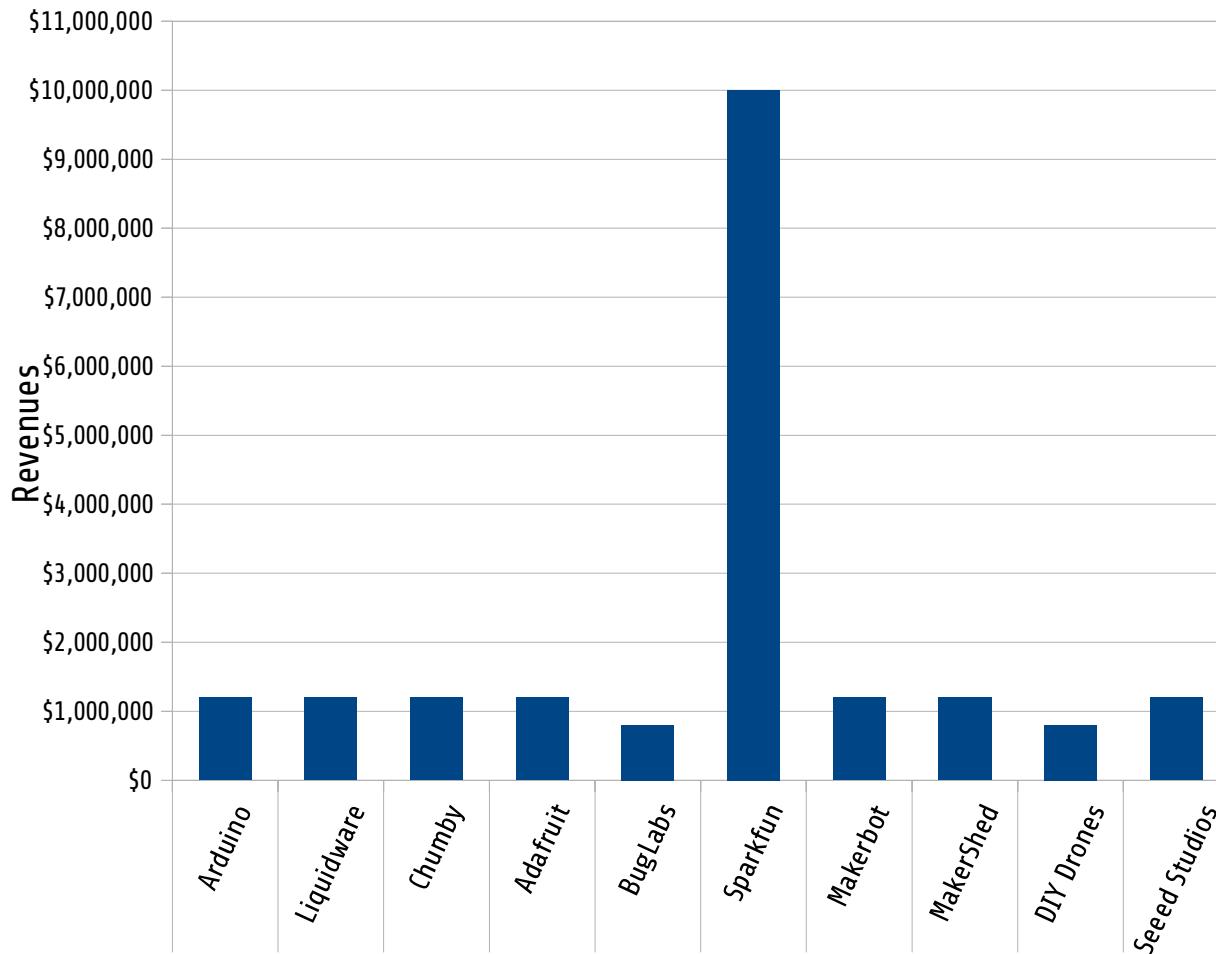


Design	Price	Author
Cargo Flight for UNICEF	\$300,000	by Justin & Christine Gignac
100 Metric Tons Of Corn Soy Blend for UNICEF	\$75,000	by Justin & Christine Gignac
Motorbike for UNICEF	\$3,064.82	by Justin & Christine Gignac
Emergency Tent for UNICEF	\$1,939.96	by Justin & Christine Gignac

... and this is exactly what new services and platforms enable!

Source: <http://www.threadless.com/>

# Open Hardware: a rising market



2009: 13 companies above \$ 1 m. (totale: \$ 50 m.). \$ 1 billion by 2015.

Source: <http://blog.makezine.com/archive/2010/05/million-dollar-baby-businesses-de.html>

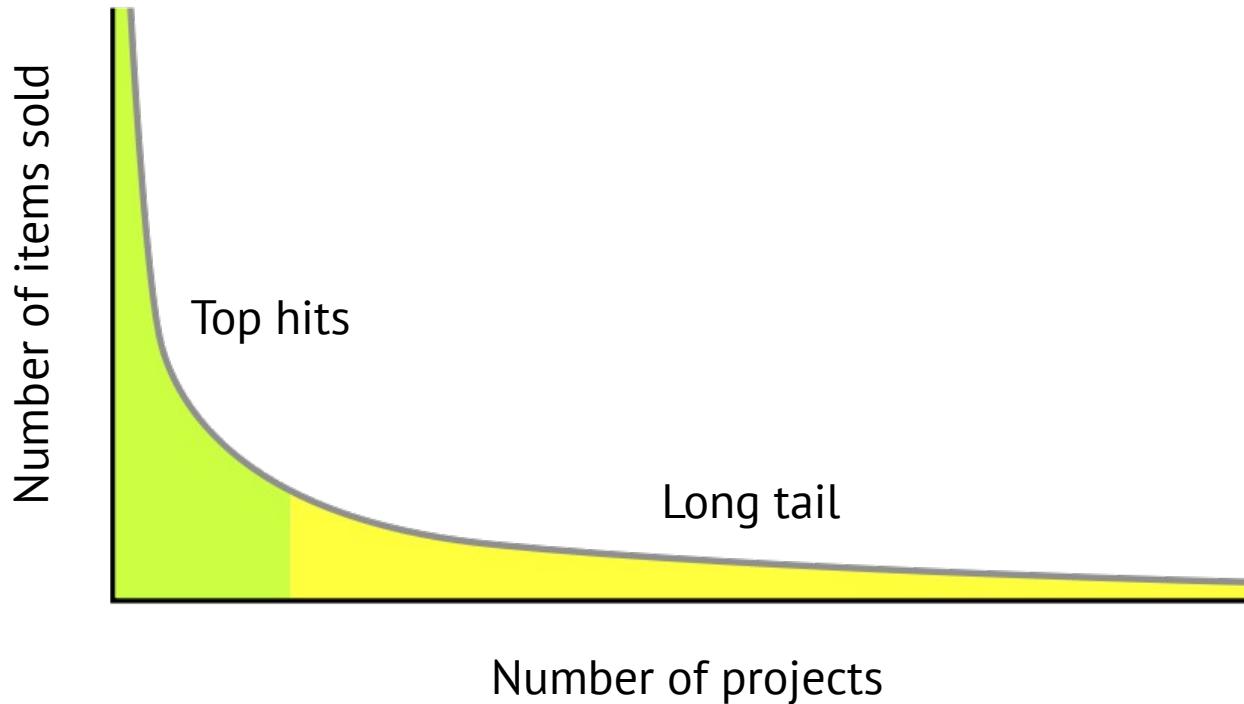
# SparkFun



*“In 2010, SparkFun had revenues of about \$18.4MM. As of April of 2011, we have around 120 employees, up from 87 a year ago.”*

*“We hope to grow by 50% this year (2011) to around \$28MM in sales. We expect to be in the 30-50MM range in the next 3-5.”*

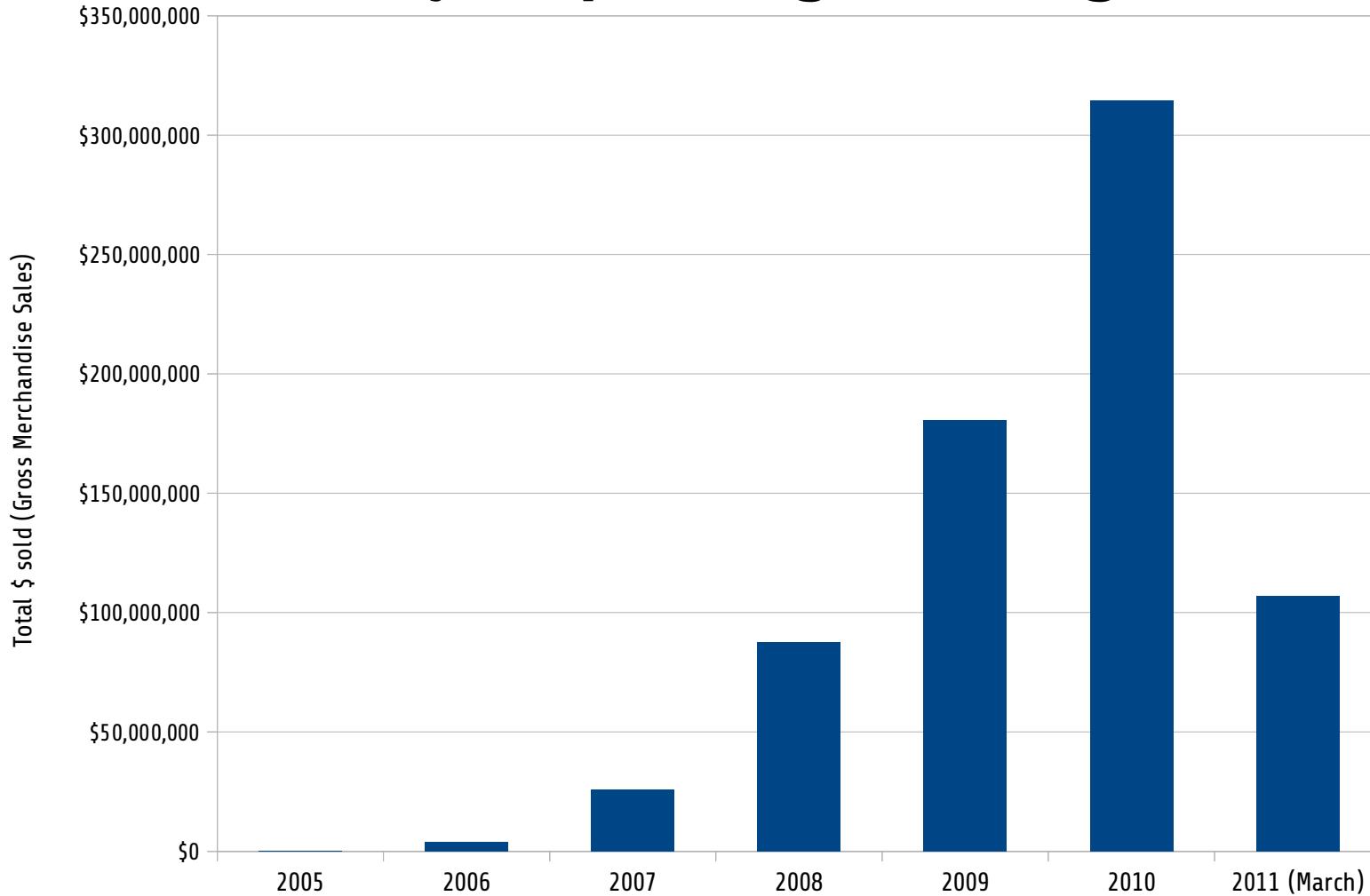
# A long tail of users / projects...



Another big player, a marketplace for your DIY / Crafts projects (exploiting the long tail effect).

Source: [http://en.wikipedia.org/wiki/Power\\_law](http://en.wikipedia.org/wiki/Power_law)

# Etsy: exploiting the long tail



Users: +8 milioni / Active shops: +800,000  
Products: 8.5 millions.

Source: <http://www.etsy.com/press/kit/>

# Makers can create a startup: Makerbot



Started from an hackerspace (and from  
RepRap, even financially).

Source: <http://www.flickr.com/photos/kellycdb/6168020183/>  
<http://commons.wikimedia.org/wiki/Category:Wood>

# The market of 3D printing

3D printing market has grown by 24.1% in 2011.  
Forecasts: \$3.1 billions (2016) \$5.2 billions (2020).  
*(Wohlers Associates, 2011)*



Sustainable business  
--> \$10 Millions from VC



Not yet sustainable  
--> \$5 Millions from VC

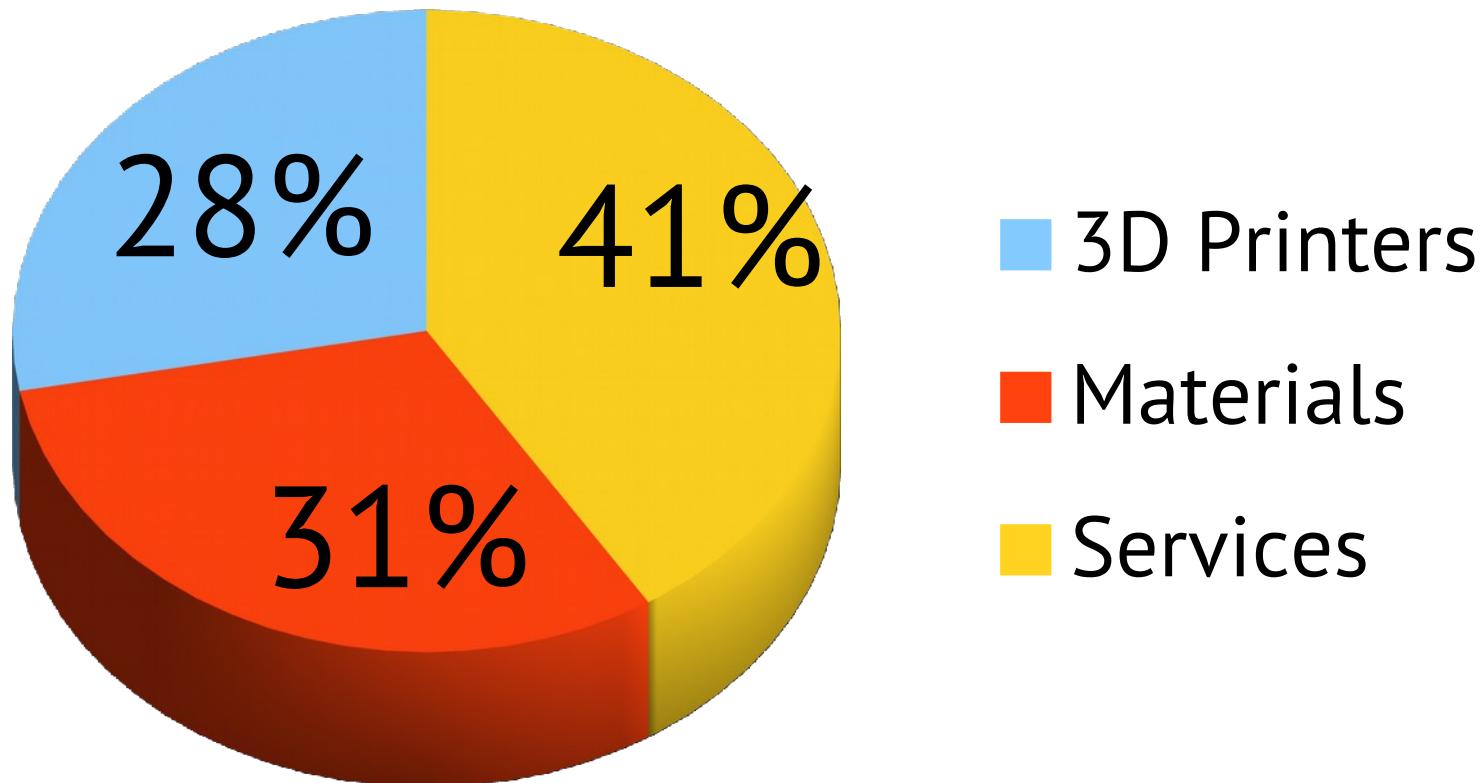
# Big corporations: 3D Systems

The screenshot shows the homepage of 3D Systems' website. At the top, there's a navigation bar with links to About Us, Newsroom, Support, Investor Relations, Where to Buy, Contact, and a phone number (803.326.3900). There's also a language selection for English and a Google Custom Search bar. Below the header, a main banner features a hand holding a handheld 3D printer. The word "Liberate" is overlaid on the image, followed by the text "Innovation that empowers ... complete freedom of design" and a "Read more »" button. To the right of the banner is a sidebar with sections for Announcements, News, and Connect With Us. The Announcements section highlights the "Z Corporation Acquisition Completed!" and mentions "Complete 3D content-to-print solutions - Learn More". It also lists three bullet points: "Ideation To Manufacturing", "High Speed To High Resolution", and "Full Color To Fully Functional Parts". The News section has a heading "Endless applications flexibility from a single source! 3D Systems - Create with Confidence". Below the banner, there are six smaller images representing different industries: Transportation (car), Energy (wind turbine), Consumer Products (phone), Recreation (bicycles), Healthcare (doctor with syringe), and Education (two students at a computer). At the bottom of the page, there's a footer with links to Home, Contact, Sales Terms, Terms And Conditions, Privacy Statement, and Investor Relations. It also includes a copyright notice (Copyright ©1997-2011 3D Systems, Inc. All rights reserved.) and social media icons for various platforms like RSS, Facebook, YouTube, Twitter, and LinkedIn.

Not only hackers or startups are in this field,  
but even big and old companies.

Source: <http://www.3dsystems.com/>

# Digital Fabrication: not just machines



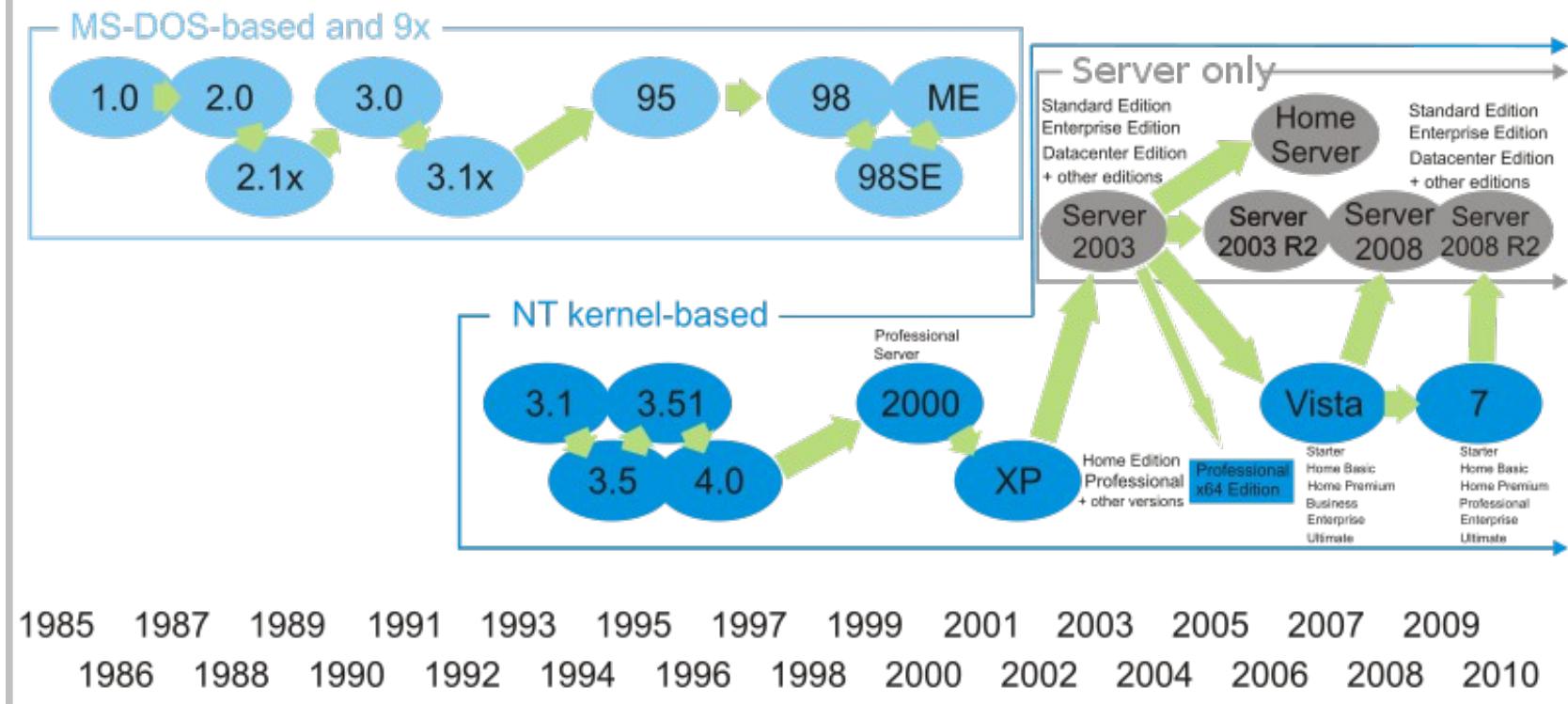
---

There are many ways for making money with  
digital fabrication...

Source: <http://investor.3dsystems.com/>

# A typical closed innovation system

## Microsoft Windows family tree



This is the typical evolution of a closed company...

Source: [http://en.wikipedia.org/wiki/Timeline\\_of\\_Microsoft\\_Windows](http://en.wikipedia.org/wiki/Timeline_of_Microsoft_Windows)

1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007

# Linux distro timeline

Version 7.2 by NPU (nonplusx@gmail.com)

For the latest version, visit kde-files.org

Feel free to modify and spread. Mail me for updates, corrections and source flw/xcf files

Based on "Línea del tiempo Distribuciones Linux" by A. Sandoval (microteknologias.cl)  
Additional info: distrowatch.com/wikipedia.org

# An open innovation system



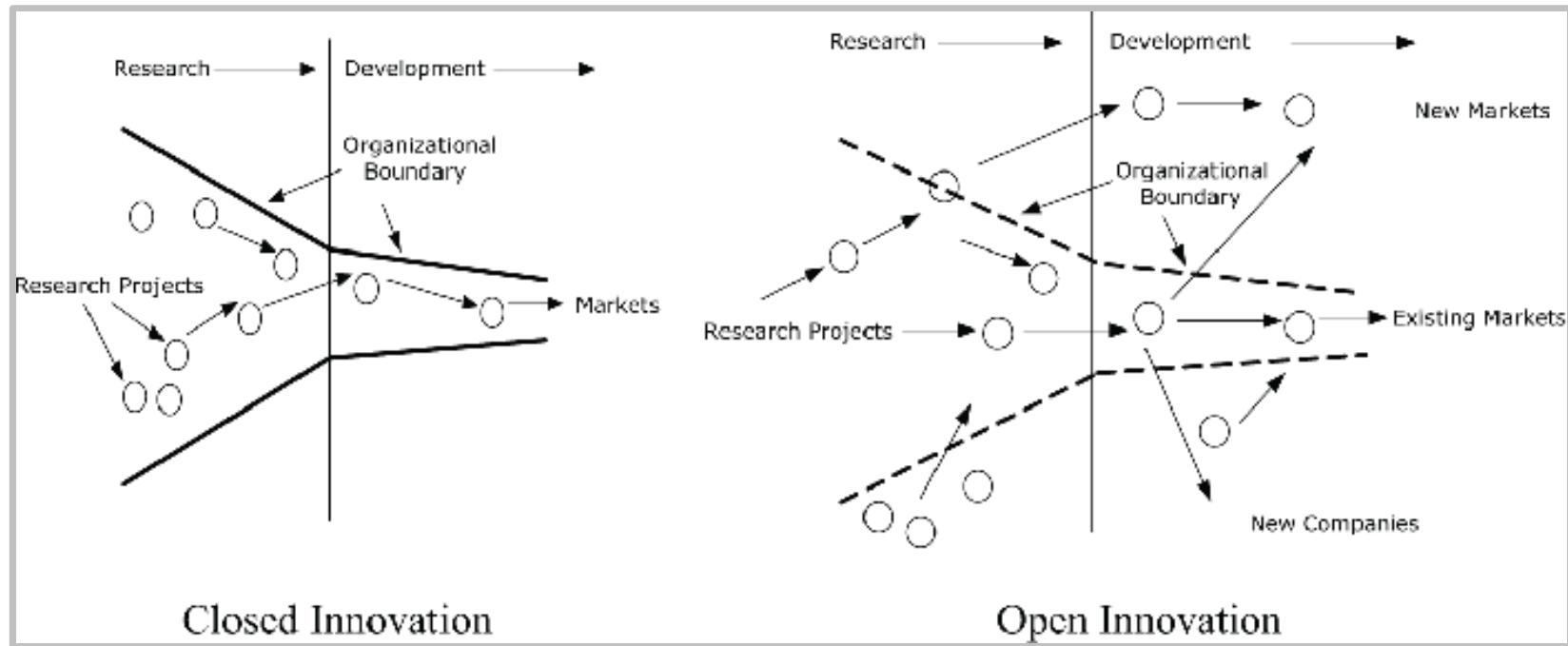
GNU/Linux

And newer pictures are too big for a slide :-)

Source: <http://futurist.se/gldt/>

1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007

# Open Innovation vs. Closed Innovation



Firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as the firms look to advance their technology.

# Open Innovation vs. Open Source

“Open innovation is sometimes conflated with open source methodologies for software development. There are some concepts that are shared between the two, such as the idea of greater external sources of information to create value. However, open innovation explicitly incorporates the business model as the source of both value creation and value capture. This latter role of the business model enables the organization to sustain its position in the industry value chain over time. While open source shares the focus on value creation throughout an industry value chain, its proponents usually deny or downplay the importance of value capture.”

Source: Chesbrough, H., 2011. Open Services Innovation: Rethinking Your Business to Grow and Compete in a New Era 1st ed., Jossey-Bass.

---

# Look for what is becoming a *commodity*

A **commodity** is a good for which there is demand, but which is supplied without qualitative differentiation across a market. [...] the market treats it as equivalent or nearly so no matter who produces it.

Source: <http://en.wikipedia.org/wiki/Commodity>

**Commoditization** (also called commodification) occurs as a goods or services market loses differentiation across its supply base, often by the diffusion of the intellectual capital necessary to acquire or produce it efficiently. [...] a unique, branded product into a market based on undifferentiated products.

Source: <http://en.wikipedia.org/wiki/Commoditization>

---

# Hardware and Software, becoming commodities

- \* ('50s-'70s) **Hardware** is the product, software is for free:  
mainframes
    - > Hacker ethic of sharing information
  - \* ('80s-'90s) Hardware is commodity, **software** is the product and it's proprietary: personal computers
    - > Microsoft emerges
  - \* ('00s-...) Even software is a commodity, so let's **sell services and get data from users**: open source, web 2.0, services around software, software as service, the cloud
    - > web 2.0 emerges
-

# Manufacturing and Design, becoming commodities

- \* ('90s-'00s) Manufacturing becomes a commodity and slowly disappears in the West (thanks to China)
- \* ('10s...) Now it's even more a commodity (thanks to Fabbing)
- \* ('00s...) Professional design is slowly becoming a commodity (thanks to Fast Fashion, Ikea, design schools bubble, Shanzai)

--> Where is **value now**, in Design and Manufacturing?

---

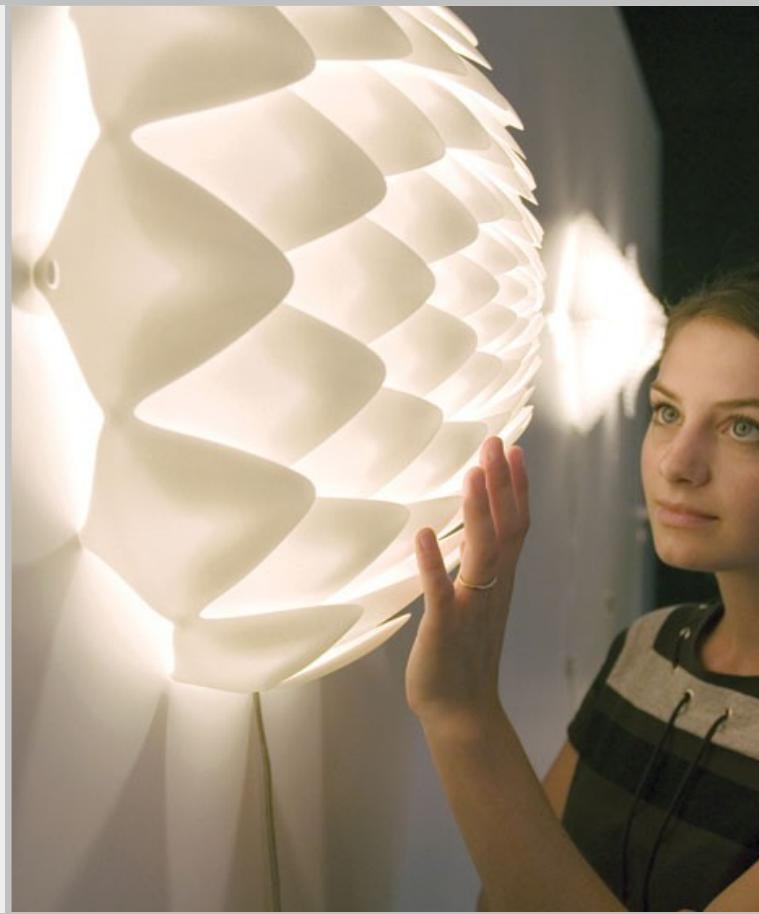
# Fabbing + designers = \$\$\$ + Open Design

3D SYSTEMS ACQUIRES FREEDOM OF CREATION  
FOC GENERAL 12.MAY.2011

3D Systems Corporation (NASDAQ: TDSC) announced today that it has acquired Freedom Of Creation (FOC), the pioneering 3D printing design company based in Amsterdam, The Netherlands. Click here for the official 3D Systems press release.



The image shows the logos for 3D Systems and Freedom Of Creation (FOC). The 3D Systems logo features a large, stylized '3' with diagonal stripes followed by the word 'SYSTEMS'. To its right is a red heart shape. Below this is the FOC logo, which consists of the letters 'FOC' in a bold, black, sans-serif font.



---

Big corporations love shopping Design companies for selling their content with 3D printers.

Source: <http://www.freedomofcreation.com/home/3d-systems-acquires-freedom-of-creation>

# But even makers may be giving content away...

a MakerBot Industries website

# THINGIVERSE

THINGS   TOOLS   TAGS   BLOG

Welcome, friend.  
Please [REGISTER](#) or [LOGIN](#) to rock.

Thingiverse is a place to share digital designs that can be made into real, physical objects. Let's create a better universe, together! | [UPLOAD A THING](#)

**FEATURED**



**Botmobile Dune Buggy**

Created by  makerbot

Created on Nov 24, 2011

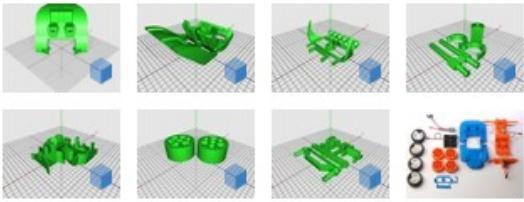
Featured on Nov 25, 2011

Order the Botmobile Kit from the MakerBot Store at [store.makerbot.com/makerbot-botmobile.html](http://store.makerbot.com/makerbot-botmobile.html) and you'll have all the parts you need to get your printed Dune Buggy going in no time!

The wind in your hair... The sun on your face... The sand in your teeth... Everyone loves a day out cruising the dunes in their trusty Botmobile Dune Buggy!

The Botmobile Dune Buggy is an open source 3d printed remote control car that you can build at home. Using the Botmobile chassis the Dune Buggy was built from the ground up as a completely new type of remote control car

See video of the Botmobile Dune Buggy in action:  
[www.youtube.com/watch?v=JLjXWzTfZTc](http://www.youtube.com/watch?v=JLjXWzTfZTc)



The same strategy of giving content to the users of the 3D printers has been adopted by Makerbot.

Source: <http://www.thingiverse.com/>

# Fabbing + designers = \$\$\$ + Open Design

The screenshot shows the Alibre website homepage. At the top, there's a navigation bar with links for "3D Software", "3D Printers", "Downloads", "Training & Support", "Successes", and "How to Buy". The main content area features a grid of images showcasing various 3D designs, including a motorcycle, a green car model, and a complex mechanical assembly. Below this grid, a section titled "3D CAD Software" describes it as "Comprehensive 3D & 2D Design, Simulation, Rendering, and more...". To the right, there are several promotional boxes: one for "3D & 2D CAD Software" (professional, inexpensive CAD software for businesses), one for "3D Printers" (personal and professional 3D printers starting at \$1699), one for "CAM Software" (completely integrated into our CAD software), one for "User Gallery & Community" (showcasing customer projects), and one for "CAD for Hobbyists" (powerful and inexpensive CAD perfect for home users). The Alibre logo, featuring a stylized 3D cube icon, is located in the top left corner.

But even anybody could become a user, so let's buy  
a design software and offer it to them.

Source: <http://blog.3dsystems.com/2011/05/3d-systems-partners-with-alibre.html>  
<http://www.alibre.com/>

# And users innovate (even in non open way)



---

Not developed by a company...

Source: <http://en.wikipedia.org/wiki/Skateboard>

# **Users innovate – a lot!**

*“We find this previously unmeasured type of household sector innovation to be quite large: 6.2% of UK consumers - 2.9 million individuals - have engaged in consumer product innovation during the prior 3 years. In aggregate, consumers’ annual product development expenditures are 2.3 times larger than the annual consumer product R&D expenditures of all firms in the UK combined.”*

Eric A. Von Hippel, Jeroen De Jong, Steven Flowers

**Comparing Business and Household Sector Innovation in Consumer Products: Findings from a Representative Study in the UK**

---

[http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1683503](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1683503)



Aalto University  
Media Factory

03.

# Business models for Open projects

# Business models of Open Source (software)

**Non-monetary** incentives:

- \* problem solving
- \* ethical questions
- \* education + learning
- \* reputation --> social interactions + jobs

--> it's not just about money! Also a **gift economy**

---

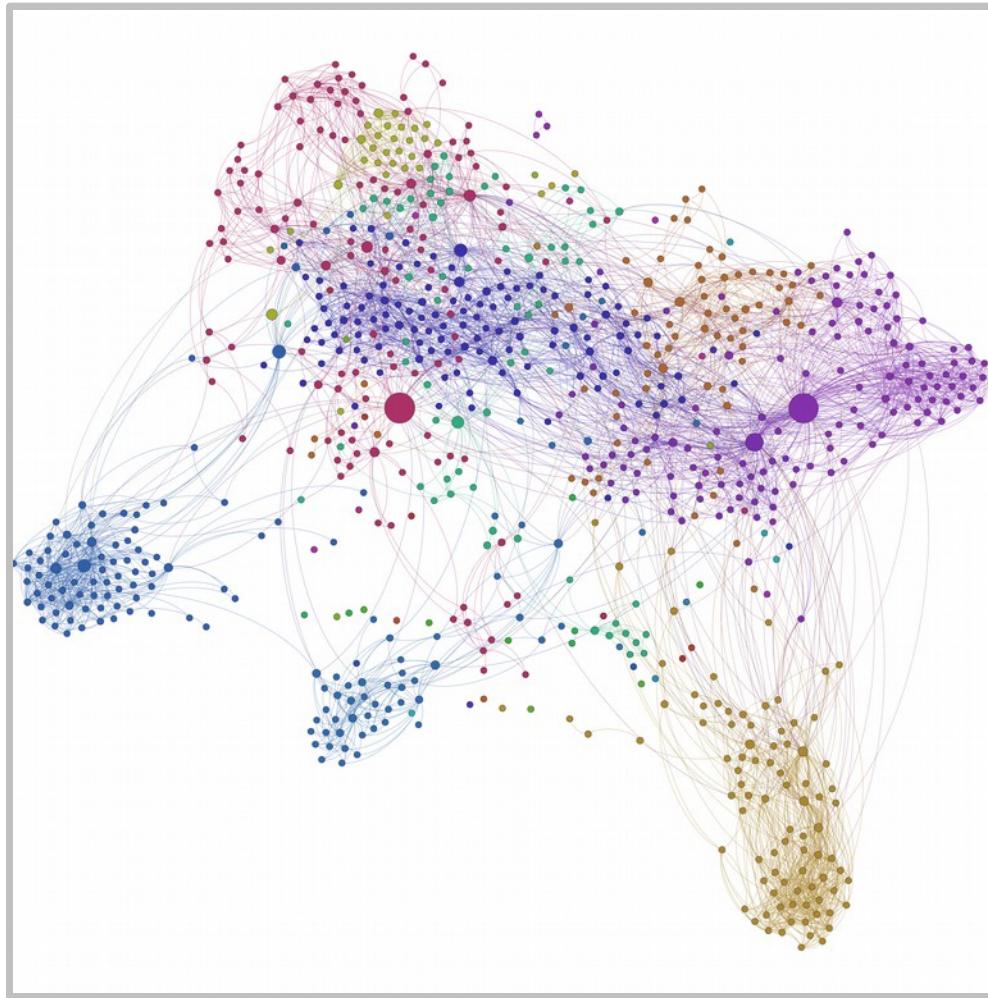
# A gift economy



A mode of exchange where valuable goods and services are regularly given without any explicit agreement for immediate or future rewards.

Source: [http://en.wikipedia.org/wiki/Gift\\_economy](http://en.wikipedia.org/wiki/Gift_economy)

# A gift economy: focus on social networks



Flows of good and services are important only for maintaining and improving social networks in the community.

Source: [http://en.wikipedia.org/wiki/Gift\\_economy](http://en.wikipedia.org/wiki/Gift_economy)

# Business models of Open Source (software)

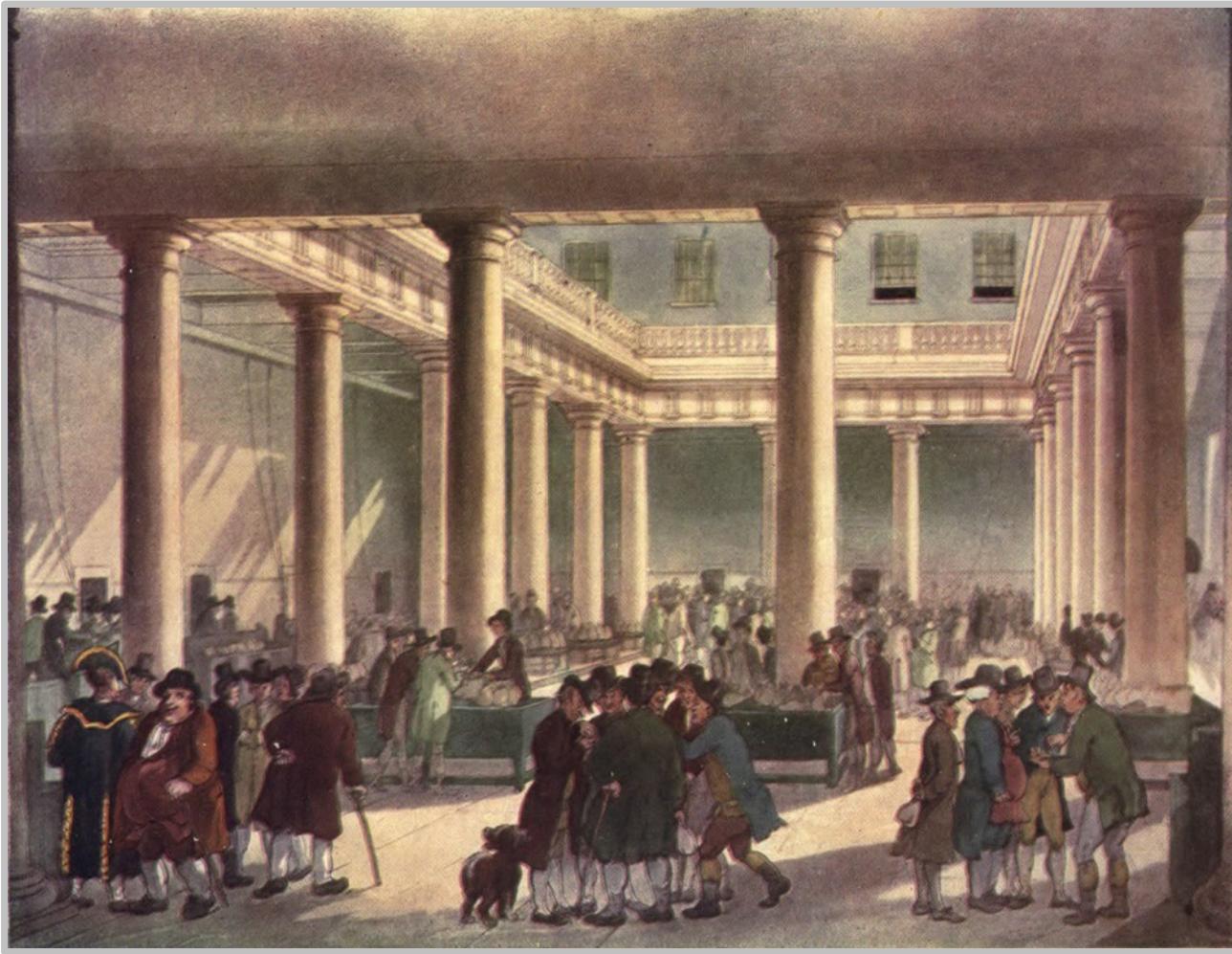
## Monetary incentives:

- \* selling software (as open or even with dual licensing)
- \* offering services (customisation, support, ...)
- \* paid developer work
- \* donation
- \* software as service (freemium, ...)
- \* embedding software into hardware

--> ... it's not just only volunteer work! Also a **market economy**

---

# A market economy



Decisions regarding investment, production and distribution are based on supply and demand and the prices are determined in a free price system.

Source: [http://en.wikipedia.org/wiki/Market\\_economy](http://en.wikipedia.org/wiki/Market_economy) [http://en.wikipedia.org/wiki/Market\\_economy](http://en.wikipedia.org/wiki/Market_economy)

# A market economy: barter



A method of exchange by which goods or services are directly exchanged for other goods or services without using a medium of exchange, such as money.

Source: <http://en.wikipedia.org/wiki/Barter>

# A market economy: money as medium



The main functions of money are distinguished as: a medium of exchange; a unit of account; a store of value.

Source: <http://commons.wikimedia.org/wiki/Category:Coins>

# Business models of Open Source (software)

## Red Hat

first open source company expected to break through the \$1bn mark in 2011.Source:

[http://www.channelregister.co.uk/2011/03/24/redhat\\_q4\\_f2011\\_numbers/](http://www.channelregister.co.uk/2011/03/24/redhat_q4_f2011_numbers/)

## Cost of developing Linux

The Linux Foundation (LF) (2008): \$10.8 billion to build the Linux community distribution Fedora 9 in today's dollars with today's software development costs.

\$1.4 billion to develop the Linux kernel alone.

Source: <http://www.linuxfoundation.org/sites/main/files/publications/estimatinglinux.html>

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# The levels of openness in Open Hardware

1. **Closed:** any hardware for which the creator of the hardware will not release any information.
2. **Open Interface:** all the documentation on how to make a piece of hardware perform the function for which it is designed is available (minimum level of openness).
3. **Open Design:** in which enough detailed documentation is provided that a functionally compatible device could be created by a third party.
4. **Open Implementation:** the complete bill of materials necessary to construct the device is available.

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Patrick McNamara defined 4 possible levels of Openness in Open Hardware.

# Note: Open Business is not completely open

- \* **identity (brand)** is fixed and is a warranty certificate
- \* **existing business ecosystems** may not be open
- \* **knowledge, expertise, tools, resources** are not always “open”



Source: <http://www.blender.org/blenderorg/blender-foundation/logo/> <http://www.arduino.cc>

# The business models of Open Hardware

- \* **Services and expertise** (customization, consulting)
  - \* **Manufacturing** of owned or third party Open Hardware
  - \* **Manufacturing of proprietary hardware** based on Open Hardware
  - \* **Dual-licensing**
  - \* **Proprietary hardware designs** based on Open Hardware
  - \* Proprietary **software tools** for developing Open Hardware
  - \* ... and ...
-

# Business models for FabLabs

- \* **Enabler:** launch new Labs and support services
  - \* **Education:** a global distributed model of education through Fab Labs (Fab Academy + peer-to-peer learning)
  - \* **Incubator:** provide infrastructure for entrepreneurs to turn their Fab Lab creations into sustainable local businesses.
  - \* **Replicated / Network:** provide a product, service or curriculum that operates by utilizing the infrastructure, staff and expertise of a local Fab Lab
-

# The business models of Open Hardware

The screenshot shows the homepage of the Sparkle Labs Electronics Kits website. At the top left is a cartoon character of a flask with a smiling face and three stars above it. To its right is the text "Sparkle Labs Electronics Kits". Above the main content area is a navigation bar with links: HOME, WEBLOG, PRODUCTS, LEARN, PROJECTS, and CONTACT. To the right of the navigation bar are two buttons: "BUY NOW ONLINE!" in green and "SAVE OR SHARE!" in pink. In the top right corner is a yellow speech bubble containing the text "CREATE HACK GROW". The main title "Discover Electronics!" is prominently displayed in large, colorful letters (pink to orange gradient). Below the title is a section titled "Learn to make your own circuits." with a descriptive paragraph about the kit's purpose and contents. To the right of this text is a 3D rendering of a breadboard with various electronic components like resistors, capacitors, and LEDs connected by wires. A green starburst badge next to the breadboard says "Over 130 parts". At the bottom right of the breadboard is the Sparkle Labs logo, which includes a flask character and the text "by sparkle labs".

**Sparkle Labs Electronics Kits**

CREATE HACK GROW

HOME WEBLOG PRODUCTS LEARN PROJECTS CONTACT

BUY NOW ONLINE!

SAVE OR SHARE!

# Discover Electronics!

**Learn to make your own circuits.**

The growing DIY movement is empowering people to take control of their products and environment. The Discover Electronics Kit contains everything you need to learn the basics of electronics and make your own projects. It contains the most common electronics components as well as a prototyping breadboard for you to get started right away. Easy full color diagrams teach you how to bring your own ideas to life.

**Online video course**

Follow along with our videos online. Take the course at your own speed, complete assignments and share your progress.

Over 130 parts

by sparkle labs

Proprietary hardware tools for learning how to develop Open Hardware.

# The business models of Open Hardware

The screenshot shows the Adafruit Industries website with a focus on their job board. The top navigation bar includes links for HOME, BLOG, FORUMS, SUPPORT, TUTORIALS, CHAT, VIDEOS, CONTACT, and JOBS. A 'LOGIN' link is also present. The left sidebar features a 'JOBS BOARD' section with categories like CAD & 3D modeling, Art & Design, Burning Man, Engineering, Installations, Instruction and teaching, IT, Manufacturing, Photography, Production, and Programming. Below these are links for All Listings, All Full Time, All Part Time, All Contract, and All Services Offered. There's also a 'Post a New Job' and 'Post Skills Offered' button, and a search bar with a placeholder 'Search for a job:' and a 'search' button.

**JOBS**

Welcome to the Adafruit jobs board! The jobs board is for designers, makers, programmers, artists and engineers who are looking for great places work at & projects to work on. And like most job boards, this job board is for companies and people who need the best talent for their projects and companies.

This is a free service provided by Adafruit, all you need to do to use the job boards is be an Adafruit customer. To post your job offer or your skills (job-seeker) just log in to your Adafruit account and post a new job/skill listing or reply to the job listing.

We're currently in beta, please let us know if there are any issues are you use the site. Thank you and happy connecting!

**Featured Jobs**

- Engineering Manager** full-time at Parallax Inc. in Rocklin, CA
- Embedded Linux Developer** full-time at Bug Labs in New York
- Reliability Engineer (EE)** full-time at Solectria Renewables in Boston, MA
- Photographer** skills offered at John De Cristofaro in New York-New Jersey Metro Area
- User Researcher** full-time at Synaptics in Santa Clara, CA
- Firmware/software developer**

**Most Recent**

- Systems Administrator** part-time at SVA MFA Interaction Design in New York  
25-05-2011
- Mechatronics/Manufacturing Fellow** contract at Driptech, Inc. in Mountain View, CA and China  
19-05-2011
- Product Design Fellow** contract at Driptech, Inc. in Mountain View, CA and Pune, India  
19-05-2011
- Product Development Lead** full-time at Driptech, Inc. in Pune, India  
19-05-2011

**Most Applied To Jobs**

- Documentation/Tutorial Freelancer** part-time at Seeed Studio, Anywhere  
27 applicants
- SMD PCB Assembly** contract at Starlino Electronics, Anywhere  
22 applicants
- Prototyper / Circuit and Product Design** contract at HCX in New York  
12 applicants

Offering free services for building a greater user base.

Source: <http://www.adafruit.com/jobs/>

# The business models of Open Hardware



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**Make and sell**  
electronic products

Now you can make and sell electronic products with your Personal Factory and showroom! [How it works](#)

[Start making >](#)

- Free Personal Factory & showroom
- No setup fees
- No minimum orders
- Custom made in 1 to 2 weeks
- Shipped to your door
- 365-day free replacement policy

  
[See the new materials](#)

**1500+ new materials!**

 Sparkfun is an official supplier to Ponoko of over 1500 new materials.

Partnership between hardware and fabbing companies

Source: <http://www.ponoko.com/make-and-sell/electronics>

# The business models of Open Hardware

The screenshot shows the homepage of bildr.blog. At the top left is the logo "bildr.blog". To the right is a search bar with the placeholder "search blog..." and a magnifying glass icon. Further right is a "Login / Register" link. Below the header, there are two navigation links: "about" and "write for us". The main content area features a large graphic on the left showing a grid of circular components connected by lines, resembling a modular circuit board or a social network. To the right of this graphic is a stylized illustration of a person holding a speech bubble that says "Ours!" and a small brown cardboard box. The text "communal knowhow" is overlaid on the right side of the graphic. Below this graphic is a descriptive paragraph.

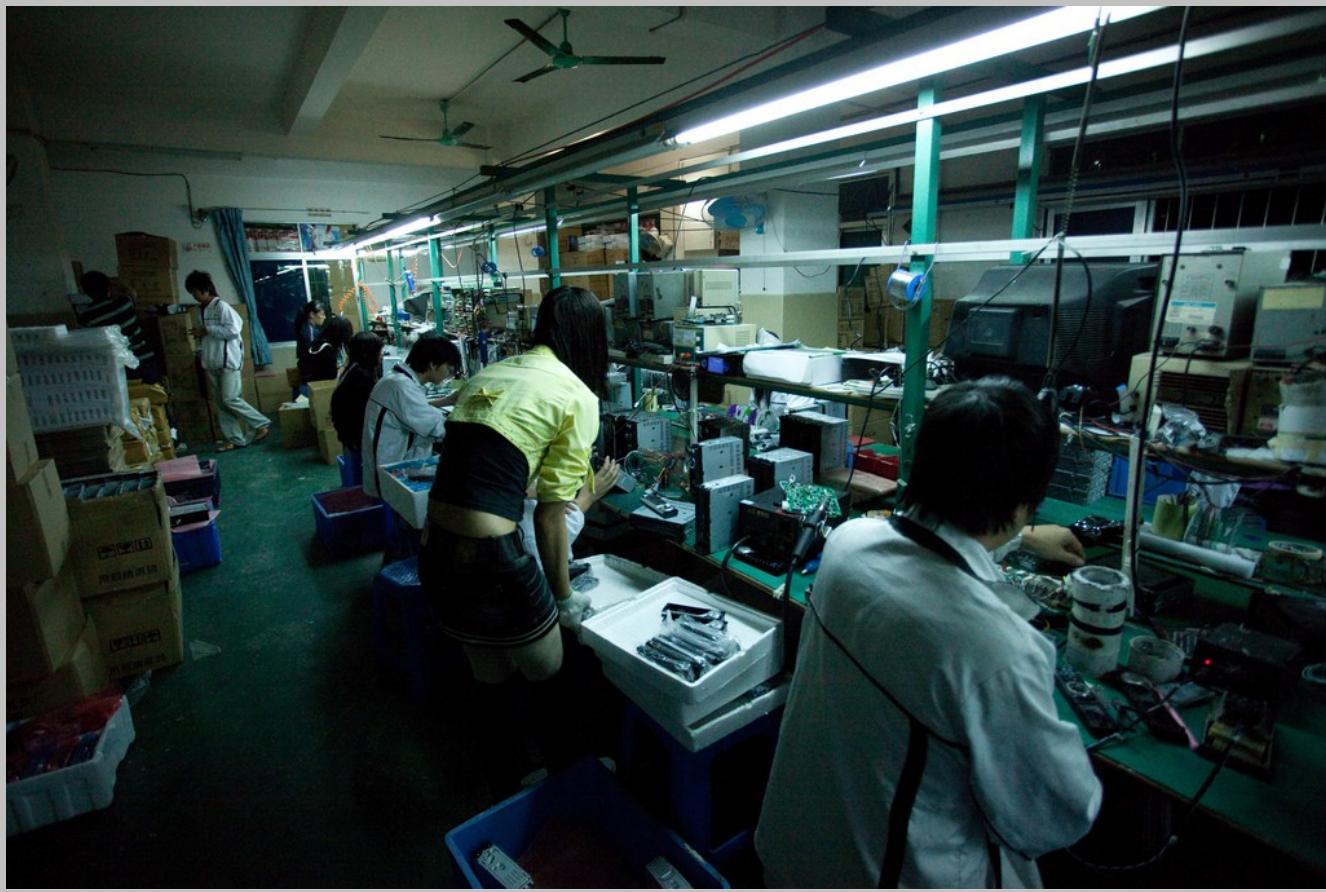
We are a community of makers, artists, designers, and builders focused on simplifying the world of electronics DIY by modularizing information. Instead of showcasing users' projects, we offer bite-size, easy-to-follow articles that help you hit the ground running.

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Funding Open Hardware projects in exchange for documentation

Source: <http://bildr.org/>

# The business models of Open Hardware

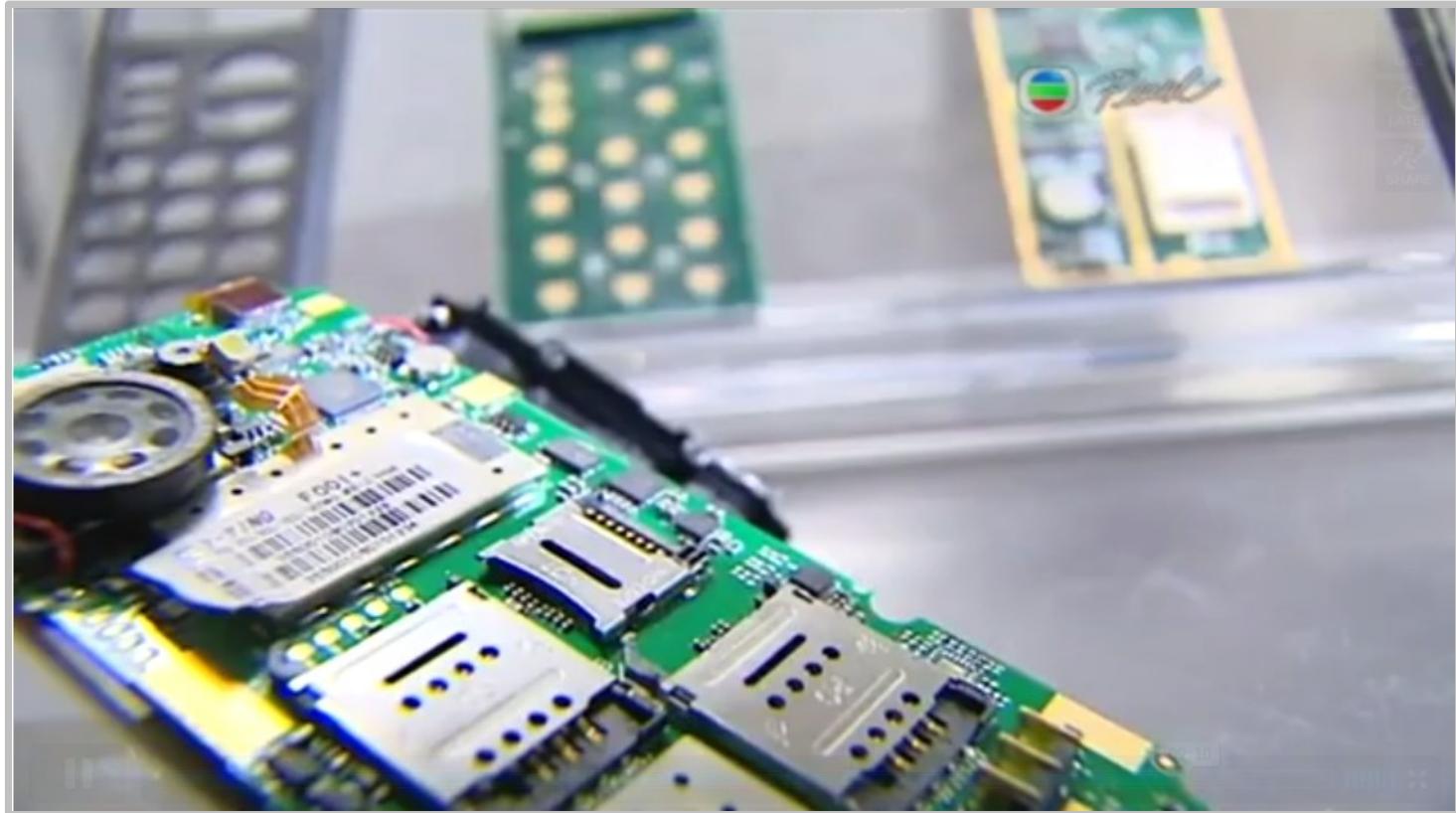


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Piracy as a learning and market building strategy: Shanzai

Source: <http://www.flickr.com/photos/ttstam/4177935719/>

# The business models of Open Hardware



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Piracy as a learning and market building strategy: Shanzai

Source: <http://vimeo.com/26980501>

# The business models of Open Hardware

## MakerBot Botcave Store Opens Today!

POSTED BY BRE PETTIS ON FRIDAY, NOVEMBER 26, 2010 IN BOTCAVE STORE



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Brick and mortar stores: Makerbot, the Botcave

Source: <http://www.makerbot.com/blog/2010/11/26/makerbot-botcave-store-opens-today/>

# The business models of Open Hardware



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Renting spaces for co-working / funding spaces by a community: hackerspaces.

# The business models of Open Hardware



## Open Source Hardware Reserve Bank<sup>cc</sup> Supporting Do-It-Yourself Open Source Hardware Projects

The mission of the bank is to fund and invest in Open Source Hardware. It helps open source projects achieve scale discounts at low quantities of production, where most DIY happens. The objective of the bank is to break-even, and sustain and grow Open Source Hardware.

### Queues

#### EqualizerShield



The EqualizerShield is a project from Matt and Chris for a 10x10 blue LED matrix that is intercompatible with the Arduino, Freeduino, and Illuminato.

It has two modes, one for a built-in 8-channel analog equalizer, and one for a serial-controlled LED matrix. [Click here to buy & build](#)



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Microcredit / peer-to-peer lending / crowdfunding: Open Hardware Bank

# Similar models for DIY Craft... Sewing Cafes



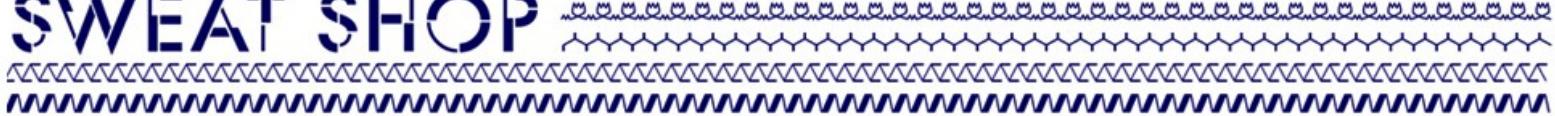
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Renting spaces for co-working: Sewing Cafes

Source: <http://sweatshopparis.blogspot.com/>

# Similar models for DIY Craft... Sewing Cafes

# SWEAT SHOP

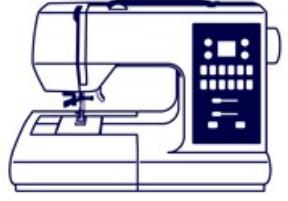


NOUVEAUTÉ  
CONCEPT  
**LOCATION**  
ATELIERS  
BON CADEAU  
ÉVÉNEMENTS  
PRESSE  
CONTACT  
LIENS

BLOG  
SHOP

ENGLISH



**1**  = 6E/h

**LOCATION DES MACHINES À COUDRE**

Sur le principe des cybercafés, chacun a la possibilité de louer une machine à coudre sur place, à l'heure ou au forfait. À tout moment de la journée et sans rendez-vous, les clients peuvent venir s'installer à un poste de travail et commencer à coudre en utilisant une machine prêtée à l'emploi.

Sweat Shop met à disposition ciseaux, aiguilles, fils, etc.

1H.....	6E
10H.....	55E
20H.....	100E
Promo 'Couple'.....	10E/H
Promo Day Pass (+café ou thé offert) ..	25E
Location surjeteuse.....	10E/H

- 10% pour étudiants

Renting spaces for co-working: Sewing Cafes

# Open Money: making digital a physical medium

The screenshot shows the Armory Bitcoin Wallet Management software. At the top, there's a menu bar with 'File', 'Wallet', and 'User'. Below the menu is the 'Available Wallets' section, which lists four wallets with their IDs, names, security levels, and balances:

ID	Name	Security	Balance
21udkeoTU	Not my money	Watching-Only	3.377
36AjLSUM4	Keys stored on EeePC	Offline	4.0001
3VB8XSoY	Long-term savings	No Encryption	11.7882
2zftxA7Q	First wallet	Encrypted	12.878709

Below this is the 'Ledger' section, which displays a list of transactions with columns for Date, Wallet, Comments, and Amount. The transactions are as follows:

Date	Wallet	Comments	Amount
2012-Jan-02 02:39am	First wallet	Swept one address to another in this wallet	0.6295
2011-Dec-31 06:30pm	Long-term savings		-3.4985
2011-Dec-31 06:30pm	First wallet		3.4985
2011-Dec-31 04:52am	Not my money		0.377
2011-Dec-31 04:52am	Long-term savings		-0.507
2011-Dec-31 04:52am	First wallet		0.13
2011-Dec-28 03:52pm	Long-term savings	Transferred to my encrypted wallet	-1.00
2011-Dec-28 03:52pm	First wallet		1.00

At the bottom left, there's a 'Filter' dropdown set to 'All Wallets'. To the right, the total funds and spendable funds are displayed:

Total Funds: 32.04450900 BTC  
Spendable Funds: 32.04450900 BTC

Money is now being redesigned by many open source projects, where the governance of the flows of digital money is designed by the software: Bitcoin.

Source: <http://en.wikipedia.org/wiki/Bitcoin>  
[http://www.wired.com/magazine/2011/11-mf\\_bitcoin/](http://www.wired.com/magazine/2011/11-mf_bitcoin/)

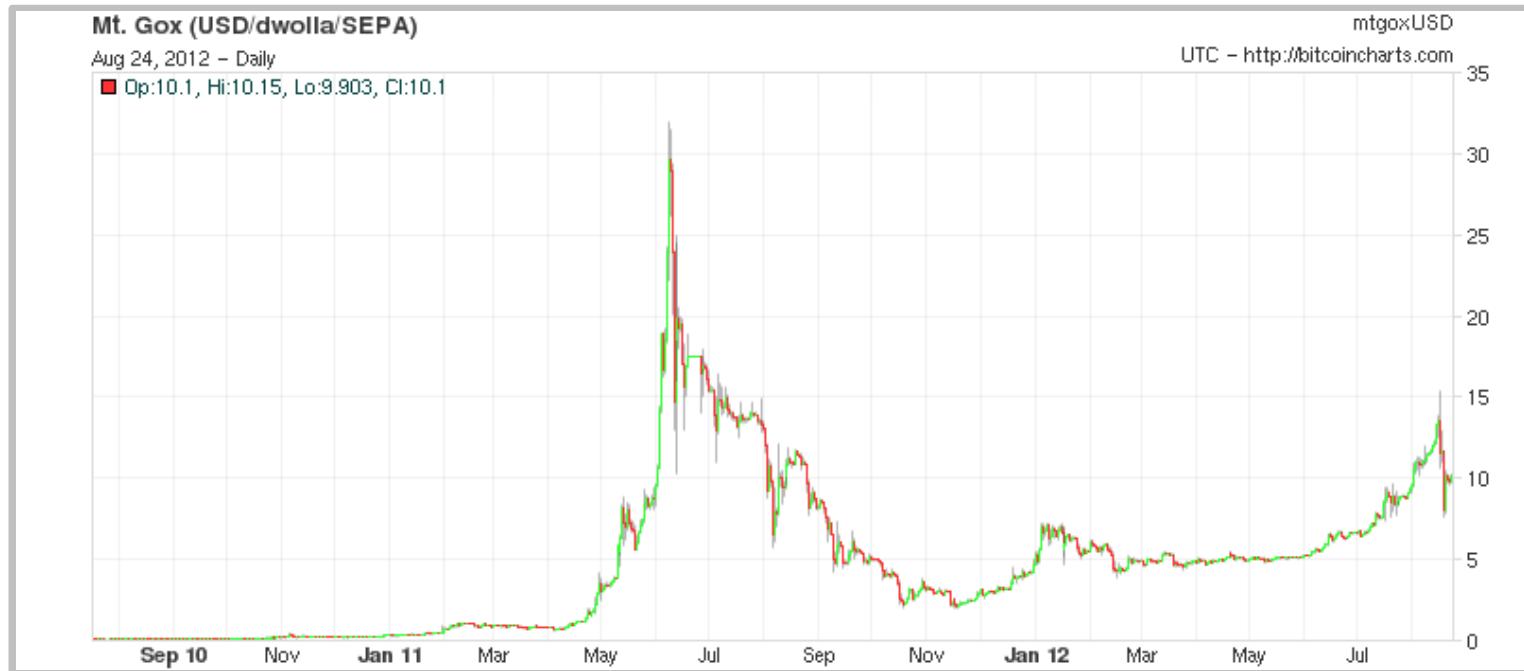
# Open Money: making digital a physical medium



Money is now being redesigned by many open source projects, where the governance of the flows of digital money is designed by the software: Bitcoin.

Source: <http://www.youtube.com/watch?v=Um630Qz3bj0>

# Open Money: it still needs business models



But redesigning money is only half of the solution: we need to understand its dynamics, and the possible business models it generates.

Source: <http://en.wikipedia.org/wiki/Bitcoin>  
[http://www.wired.com/magazine/2011/11/mf\\_bitcoin/](http://www.wired.com/magazine/2011/11/mf_bitcoin/)

# Crowdsourcing, mass-collaboration and work

*“If crowdsourcing runs on people’s “spare cycles”—their downtime not claimed by work or family obligations—that quantity is now in surplus. [...] Crowdsourcing is proving to be highly efficient at identifying and exploiting those “spare cycles”.”*

Source: Howe, J., 2008. *Crowdsourcing: Why the Power of the Crowd Is Driving the Future of Business* 1st ed., Crown Business.

*“First the ‘human resource’ is not just inside the boundaries of your company. The world is your resource. This is more than outsourcing. Companies can now tap into vast pools of labour.”*

Source: Tapscott, D. & Williams, A.D., 2006. *Wikinomics: How Mass Collaboration Changes Everything*, Portfolio Hardcover.

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# ... and a lesson from the past

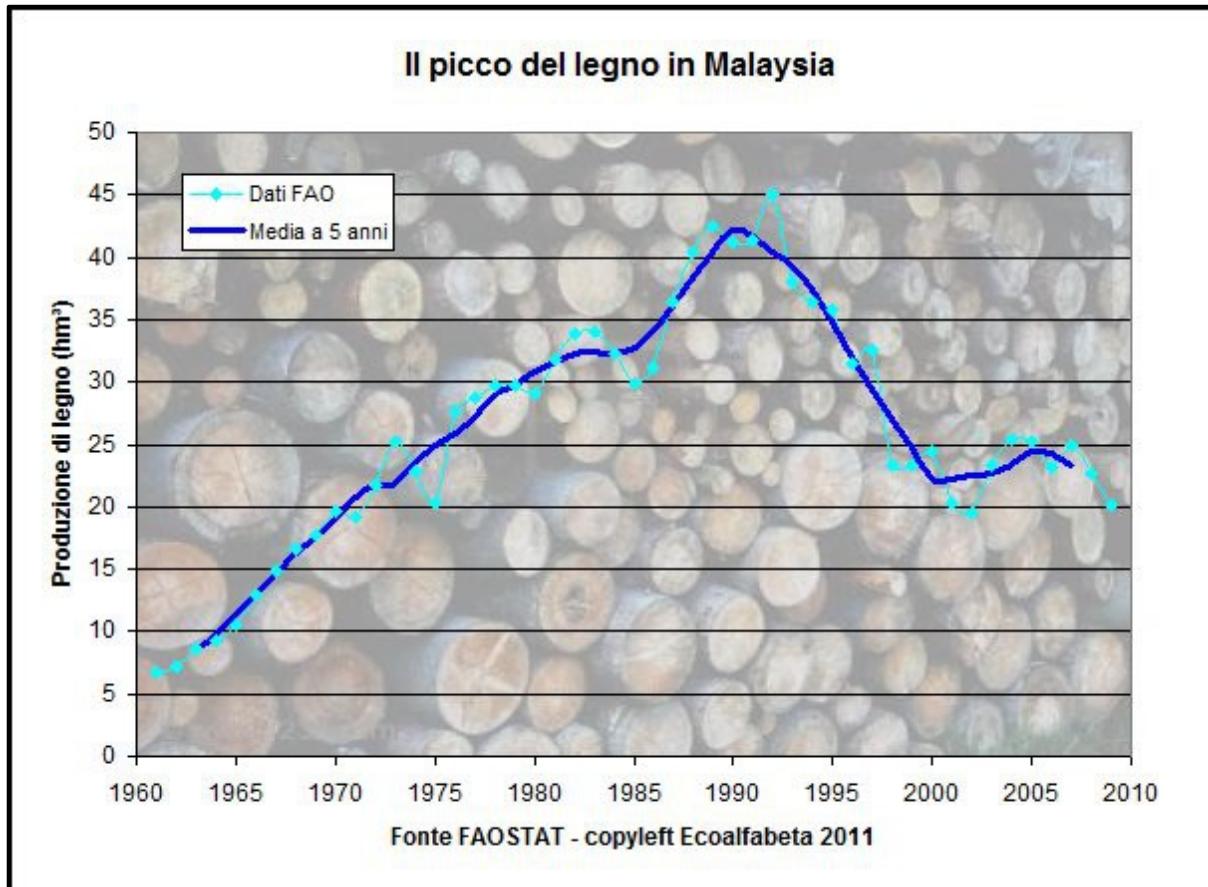


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In 1914 Ford doubled the wages, enabling his workers to afford the cars they were producing. Ford explained the policy as **profit-sharing** rather than wages.

Source: [http://en.wikipedia.org/wiki/Henry\\_Ford](http://en.wikipedia.org/wiki/Henry_Ford)

# When everything is peaking...



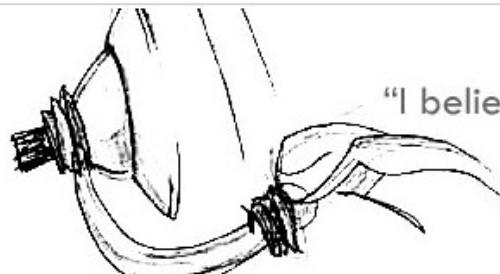
Even renewable resources like wood are peaking.. What and how are we going to manufacture when everybody will be able to do it?

Source: <http://ecoalfabeta.blogosfera.it/2011/03/il-picco-del-legno.html>

# ... reinventing an *open* wheel is not enough

Home Contact search...





"I believe in **horses**, automobiles are a transient appearance."

Wilhelm II. (1859-1941), German Emperor

**Oscar - Main**

- [Home](#)
- [Idea](#)
- [Concept](#)
- [Forums](#)
- [Documents](#)
- [Links](#)
- [Contact](#)

**Oscar - Workbench**

- [Integration](#)
- [Modules](#)
- [Tools](#)
- [Network](#)

**Home**

**Oscar - Release 0.2**

It is the goal of the OSCar Project to develop a car according to Open Source principles. In our opinion, a car is not a vehicle full of high-tech gadgets. Instead, we are looking for a simple and functional concept to spread mobility. Form follows function.

Apart from that, OSCar is not just a car. It is about new ways of mobility and the spreading of the Open Source idea in the real (physical) world. On this website, you will find a great community of developers and drivers who want to invent mobility anew and together.

The project started in 1999. In December 2005, it reached release 0.2. Starting in 2006, everyone is welcome to participate.

[PDF](#) [PRINT](#) [EMAIL](#)



Design Contribution Rel. 0.2 by Tiago Do Vale (2006)

**Login User**

Username   
Password   
 Remember me  
**Login** [Lost Password?](#)

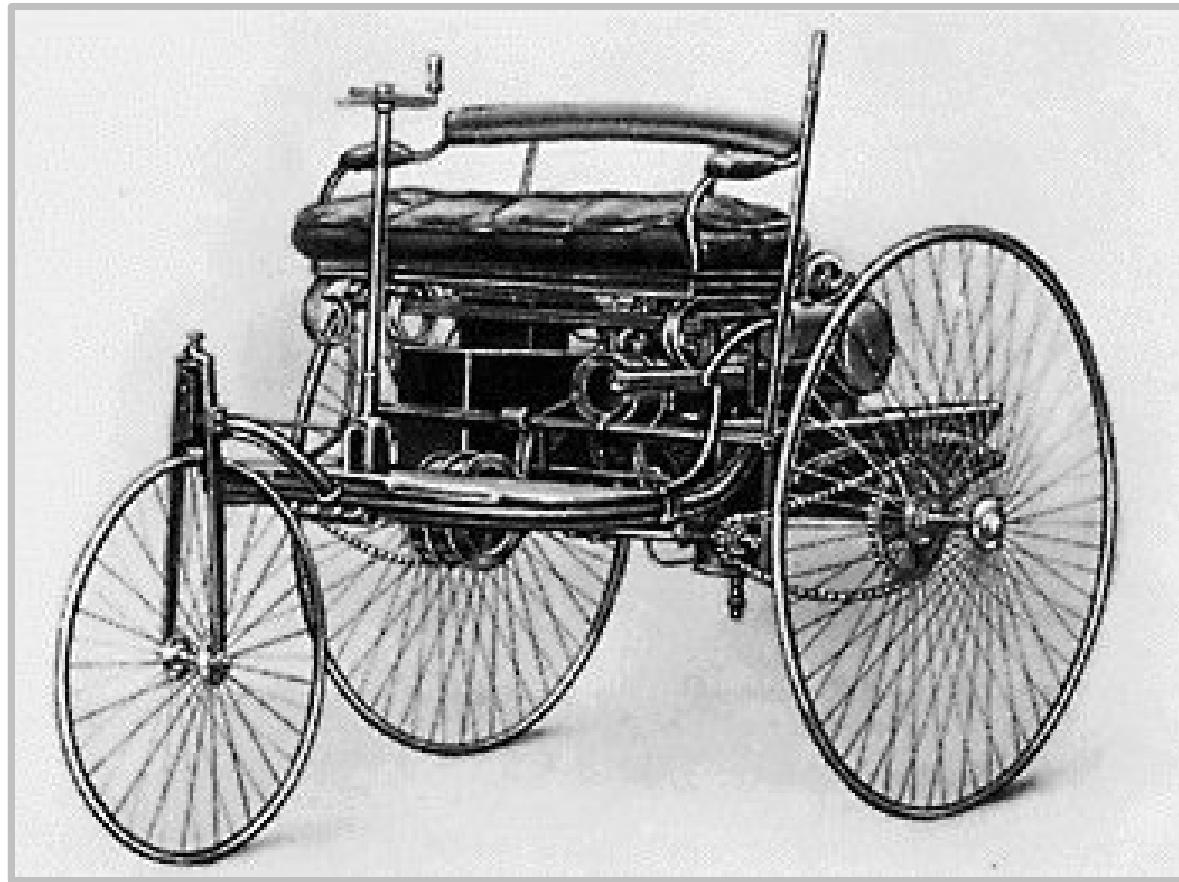
No account yet? [Register](#)

Most Active Threads

1. [This thread has fallen out of scope for \(354\)](#)
2. [free piston engine / Freikolben-Motor Discussion \(179\)](#)
3. [4 wheeler or 3 wheeler? \(148\)](#)

Will just making open an unsustainable past be sustainable?

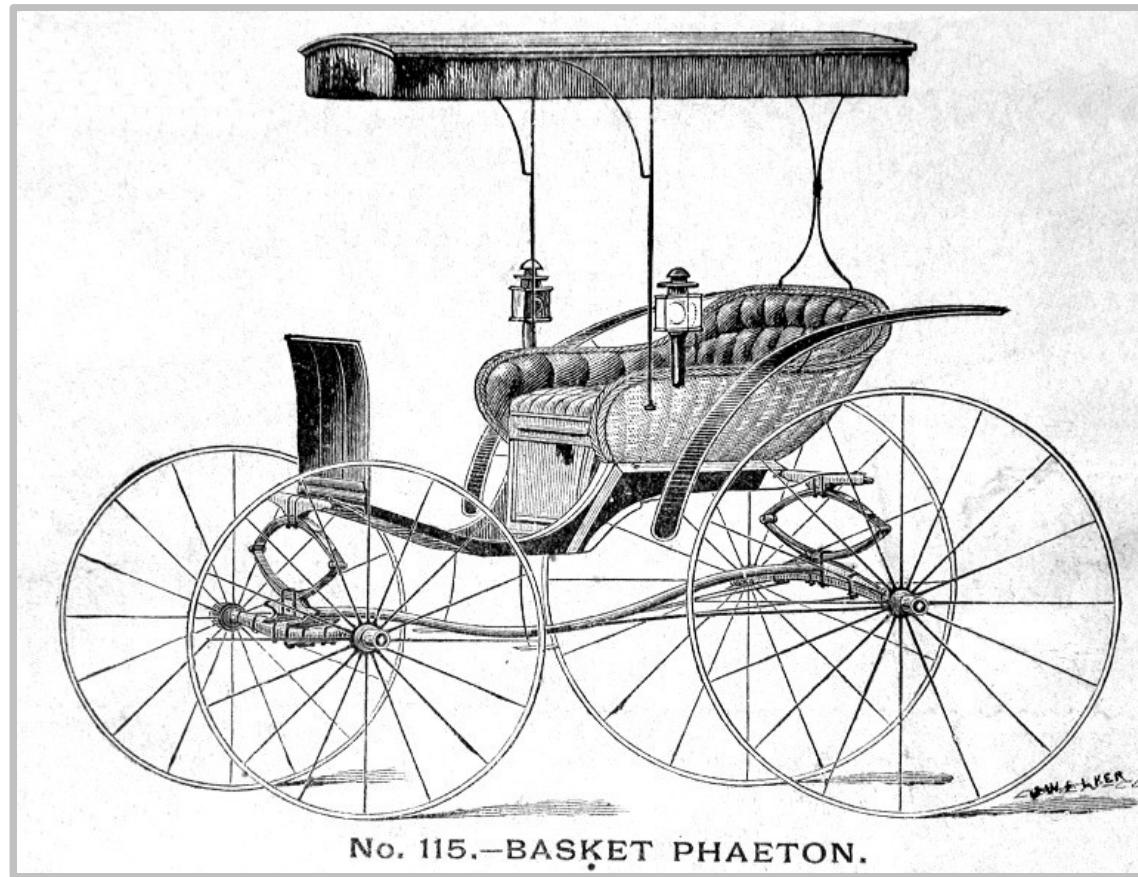
# New language, business for the new media



---

Every new technology takes time to develop its own uses, languages and business models.

# New language, business for the new media



No. 115.—BASKET PHAETON.

---

Every new technology takes time to develop its own uses, languages and business models.

# ... blocks of an Open, DIY and P2P Economy

- \* open business for **design, energy, materials, tools**
  - \* open business that consider information as **abundant** but materials and energy as **scarce resources**
  - \* open money (but well designed and **linked to energy and materials**)
  - \* **API** and **Open Data** between open businesses
  - \* **Open processes + distributed testing** of business models
-



Aalto University  
Media Factory

# Thank you!!

Massimo Menichinelli  
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[@openp2pdesign](https://twitter.com/openp2pdesign)  
<http://www.slideshare.net/openp2pdesign>

