

# Design In Tech Report 2017

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## With Special Thanks To

Michael Abbott (KPCB), Matt Mullenweg (AUTOMATTIC), Mark Armstrong (AUTOMATTIC)  
and 800+ designers and design founders, managers, executives, agency leaders, and individual contributors.

# Design in Tech Reports

2M+

Cumulative  
Views 👁️

The 2015 Report explained design's rise in value to tech as due to mobile devices and the mass-consumerization of computing. We moved from "tech-led" to "experience-led" digital products as services on smartphones took over and gave access to everyone.

The 2016 Report showed peak growth in interest by venture capital firms in design, and highlight significant growth in the acquisition of design agencies by consulting firms like McKinsey & Co and Accenture. Google emerged as a new leader in design.

The 2017 Report frames *computational* design as a key driver of accelerated growth, with inclusive cultures @work as vital for tech businesses hoping to lead in design.

# Design in Tech Report 2017

## Observations

Design isn't just about beauty; it's about market relevance and meaningful results.

At top business schools, *design thinking* is moving into the curriculum – driven by market demand.

Both McKinsey & Co and IBM have recently made appointments at their most senior levels for designers.

Adopting an *inclusive* design approach expands a tech product's total addressable market.

*Computational* designers remain in demand at technology companies of all sizes and maturity levels.

Chinese design in tech principles and practices are leading the world, but are often overlooked.

Design tool companies and design community platforms occupy new positions of value for tech.

Voice- and chat-based interfaces are grounded in mental models that don't require a visual representation.

# Sections Overview

1

## Computational Design

What is “Computational Design” and why does it matter to business + tech?

2

## DESIGN → DE\$IGN

What’s happening in startups and in M&A?

3

## Design Needs Designers

How does one hire this kind of talent?

4

## Shaping Voice

What is the business value of “Inclusive Design”?

5

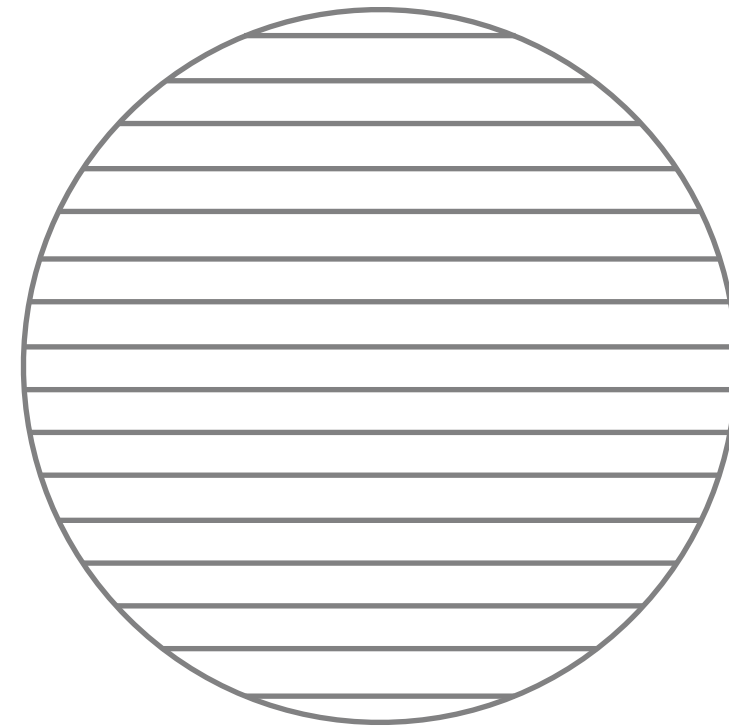
## Design Is By Nature, Inclusive

Why does inclusion go together with design?

# Review:

## There are Three Types of Design

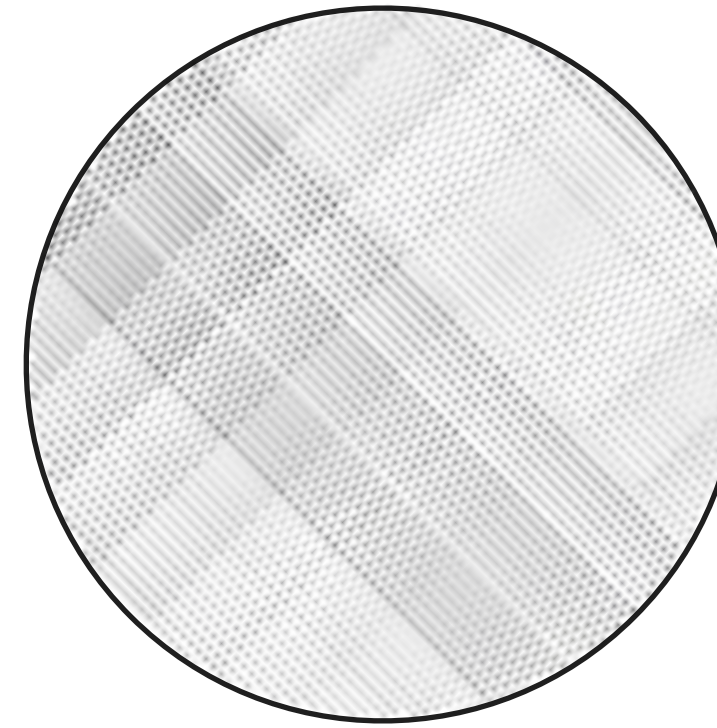
The last report reviewed the difference between Classical and Computational Design. This was somewhat controversial, but we review it here again.



### DESIGN: "CLASSICAL DESIGN"

There's a right way to make what is perfect, crafted, and complete

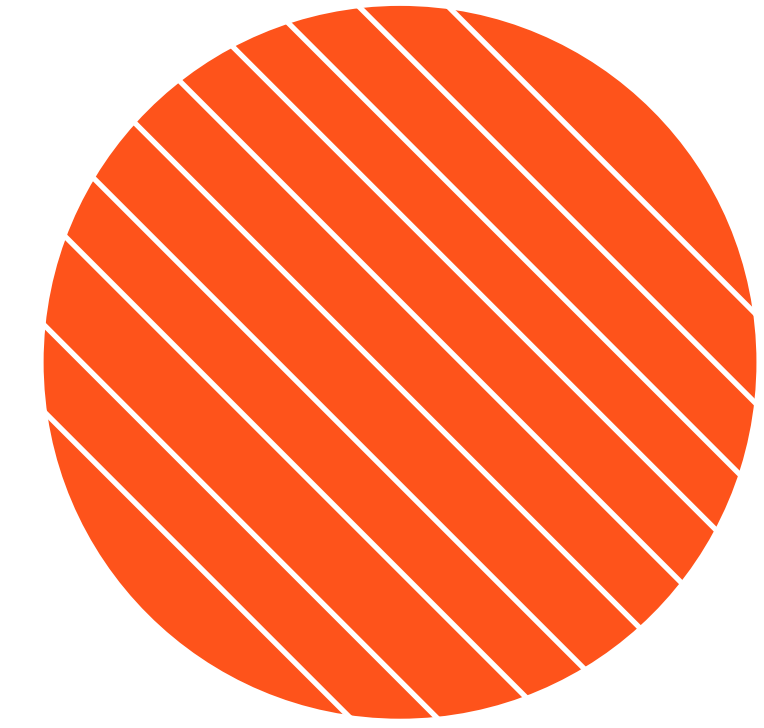
Driver/ the Industrial Revolution, and prior to that at least a few millennia of ferment.



### BUSINESS: "DESIGN THINKING"

Because execution has outpaced innovation, and experience matters

Driver/ the need to innovate in relation to individual customer needs requires empathy.



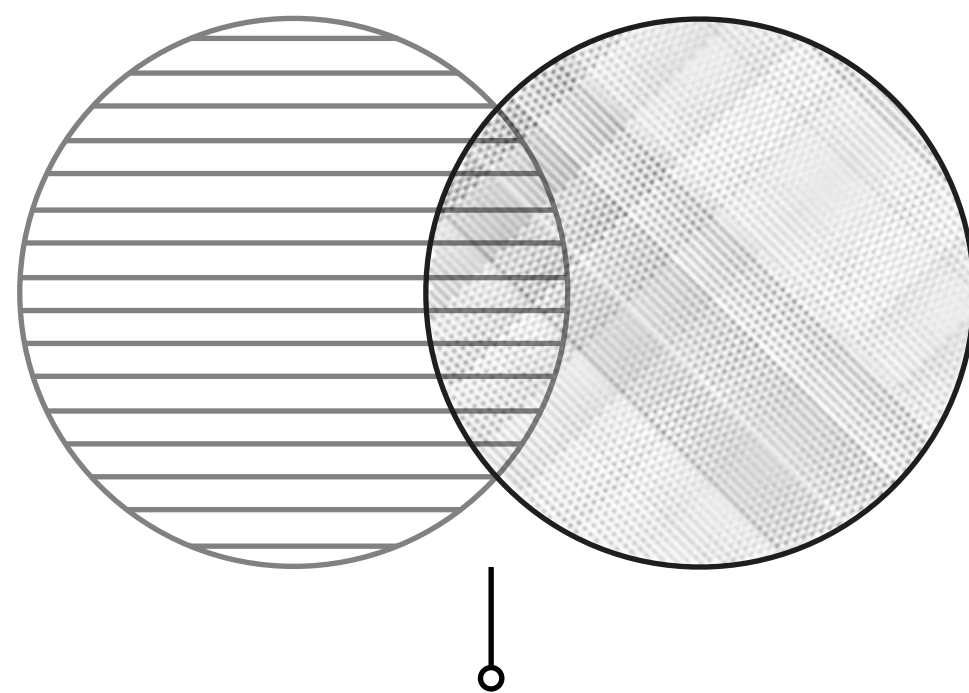
### TECHNOLOGY: "COMPUTATIONAL DESIGN"

Designing for billions of individual people and in realtime, is at scale and TBD

Driver/ the impact of Moore's Law, mobile computing, and the latest tech paradigms.

# Review:

## Classical Design vs Design Thinking



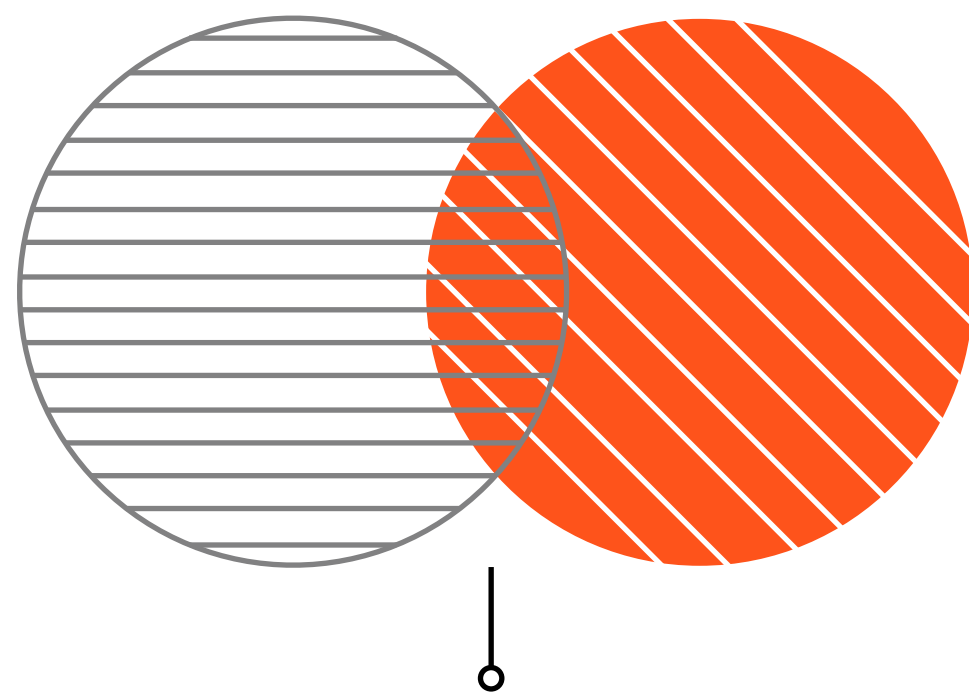
Overlapping example of these two kinds of design: A design consultancy like IDEO, Frog, or a B-school program like Yale SOM, or a classic consultancy like McKinsey, Accenture, BCG.

Both the 2015 and 2016 Design in Tech Report pointed to the emergence of “design thinking” as entering the conscious of big business — heralded by the covers of both Harvard Business Review and Bloomberg Businessweek featuring design. “Design Thinking” is different from “Classical Design” in both how it is practiced and the final outcome: the latter results in an artifact to hold in one’s hands, whereas the former results in consensus between multiple stakeholders.

	CLASSICAL DESIGN	DESIGN THINKING
Emphasis On	Practice	Strategy
Raw Materials	Paper, Wood, Metal, and Anything Physical	Post-Its, Whiteboards, and Team Members’ Time
Goal Orientation	Ship a Perfect Product/Object	Foster Constructive Divergence
Impact is Evaluated By	Acceptance, Adoption, and Awards	A Specific Product or Feature That Resulted
Involves Primarily	Classical Designers	Business Thinkers/Doers
Skills With Tools Are Generally Grounded In	Hands and Laws of Physics	Mind and Organizational Sciences

# Review:

## Classical Design vs Computational Design



Overlapping example of these two kinds of design: A smartphone, laptop, robot, and any human-facing IoT device.

When people in the tech industry talk about “design,” they often make the mistake of not differentiating between classical designers and computational designers. The former kind of designer might craft a wooden chair for a home which is used by a few people; the latter kind of designer might craft an app for a smartphone which is used by hundreds of millions of people.

	CLASSICAL DESIGN	COMPUTATIONAL DESIGN
Number of Active Users	Few to Millions	Few to Billions
Time Needed to Deploy Completed Product	Weeks to Months through Distribution Channels	Instantaneously Delivered Over the Net
“Perfection” is Achievable	Yes <i>There’s a final state.</i>	No <i>It’s always evolving.</i>
Designer’s Level of Confidence	Absolute, and Self-Validating	Generally High, but Open to Analyzing Testing/Research
Production Materials	Paper, Wood, Metal, and Anything Physical	Data, Models, Algorithms, and Anything Virtual
Skills With Tools Are Generally Grounded In	Hands and Laws of Physics	Mind and Computer + Social Sciences



# Review:

## The Origins of Computational Design

The 2016 Design in Tech Report highlighted four key pioneers of computational design – all leaders who brought Classical Design into the domain of Computer Science with a uniquely humanistic approach (in contrast to a purely technical approach, which was dominant at the time).

## Pioneers of Computational Design



GILLIAN CRAMPTON-SMITH

Royal College of Art  
Computer-Related Design  
and Ivrea Institute



RED BURNS

NYU Tisch School  
Interactive  
Telecommunication  
Program



JOY MOUNTFORD

Apple Human  
Interface Group,  
Interval, Yahoo!,  
Akamai



MURIEL COOPER

MIT Media Lab  
Visible Language  
Workshop

TODAY



■ Codepen [2014]

CODEPEN

ALEX VAZQUEZ, TIM SABAT, AND CHRIS COYIER

■ DrawBot (DesignRobots) [2003]

DrawBot

JUST VAN ROSSUM, ERIK VAN BLOKLAND,  
AND FREDERIK BERLAEN

■ Processing [2001]



BEN FRY, CASEY REAS, AND DANIEL SHIFFMAN

■ Design By Numbers [1999]



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1999



# In Practice:

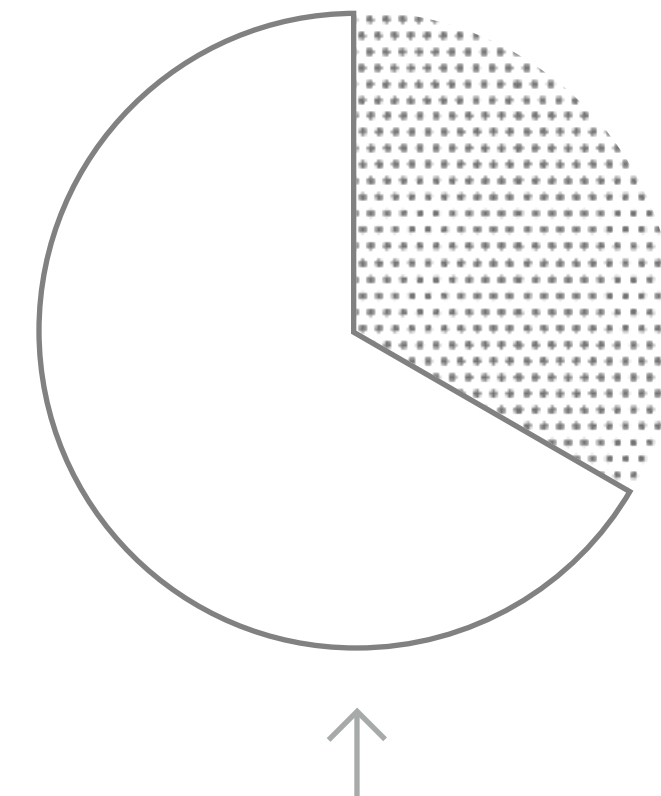
Design is Blending with Engineering Talent

2/5

Designers are involved in code development



**SOURCE**  
NEA Future of Design Survey 2016 [↗](#)



1/3

Designers surveyed had formal engineering/science training

In the 2016 Design in Tech Report we shared how 1/3 of the design leaders we surveyed had formal engineering/science training. It said to me that a considerable amount of “hybrid” talent is out there in the professional world, that wasn’t the case a few decades ago.

Last month I surveyed a group of designers and devs at Automattic (note the double-T) with regards to their Javascript expertise. In the graph below you can see two “humps” – to the right is the developers, but to the left is the designers.



“

Where do new ideas  
come from? The answer  
is simple: differences.  
Creativity comes from  
unlikely juxtapositions.

**NICHOLAS NEGROPONTE**

Professor and Co-Founder, MIT Media Laboratory

# DESIGN By the Numbers

“

If the design partner role is to help startups realize the full potential value of design, the return on investment is the ultimate barometer of success in venture capital.



IRENE AU

Design Partner, Khosla Ventures

# Design M&A Activity

Over 70 design agencies have been acquired since 2004. >50% of which have been acquired since 2015

## 2004 - 2012

COMPANY	ACQUIRED BY
2004 Frog Design	Flextronics
2007 Doblin	Monitor
2009 Bigstock	Shutterstock
2010 TAT	Rim
2011 Sofa	Facebook
2011 Typekit	Adobe
2011 Method	Globallogic
2011 Helicopter	One Kings Lane
2012 Maaik	Google
2012 Bolt Peters	Facebook
2012 80/20	Square
2012 Cuban Council	Google
2012 Behance	Adobe

## 2013 - 2014

COMPANY	ACQUIRED BY
2013 Hot Studio	Facebook
2013 Fjord	Accenture
2013 Jet Cooper	Shopify
2013 Banyan Ranch	Deloitte
2013 Hook & Loop	Infor
2013 17FEET	Google
2013 Hattery	Google
2013 Mixel	Etsy
2014 Carbon Design	Oculus/Facebook
2014 Gecko Design	Google
2014 Adaptive Path	Capital One
2014 Reactive	Accenture
2014 Flow Interactive	Deloitte
2014 Optimal Experience	PWC

COMPANY	ACQUIRED BY
2014 Cynergy Systems	KPMG
2014 S&C	BCG
2014 Ultravisual	Flipboard
2014 Aviary	Adobe

## 2015

COMPANY	ACQUIRED BY
Teehan+Lax	Facebook
Spring Studio	BBVA
Lunar Design	McKinsey
Monsoon	Capital One
DesignIt	Wipro
Seren	Ernst & Young
Mobiento	Deloitte
Lapka	Airbnb
Catalyst	Cooper *consolidation
Akta	Salesforce
Chaotic Moon	Accenture
PacificLink	Accenture
Farm Design	Flex
Tactel	Panasonic Avionics
Fotolia	Adobe

Software tool companies and creative communities.

<https://designintechreport.wordpress.com>

# Design M&A Activity *continued*

## 2016 [PART ONE]

### COMPANY

### ACQUIRED BY

Slice of Lime  
Resource/Ammirati  
ecx.io  
Aperto  
IDEO  
Fahrenheit 212  
Heat  
Gravitytank  
Fake Love  
Karmarama

Pivotal  
IBM  
IBM  
IBM  
Kyu Collective \*minority  
Capgemini  
Deloitte  
Salesforce  
New York Times  
Accenture

## 2016 [PART TWO]

### COMPANY

### ACQUIRED BY

Carbon12  
Mokriya  
Uselab  
Tiny Hearts  
Boltmade  
VeryDay  
Waybury  
**Napkin**  
**Silver Flows**  
**Macaw**  
Muzli

McKinsey  
Nagarro  
Deloitte  
Shopify  
Shopify  
McKinsey  
InVision  
InVision  
InVision  
InVision  
InVision

## 2017

### AGENCY

### ACQUIRED BY

Idean  
Unity&Variety  
Sequence  
Dribbble  
DeviantArt

Capgemini  
Salesforce  
Salesforce  
Tiny  
Wix

## Four

Design Partners were elected in the last year at McKinsey & Co [ **5 Total Design Partners** ].

## Three

IBM Distinguished Designers are corporate-appointed for the first time.

**Software tool** companies and **creative communities**.

<https://designintechreport.wordpress.com> ↗

# Takeaway:

## Startups Embody “Productive” Failure

The overwhelming majority of startups fail to make it out of their seed funding phase. And no founder claims that it is an easy path to success in the startup world. It is a tough, complicated journey to undertake as an entrepreneur which pays immense tolls on the individual and their families and friends. But they don't let failure ruin their optimism.

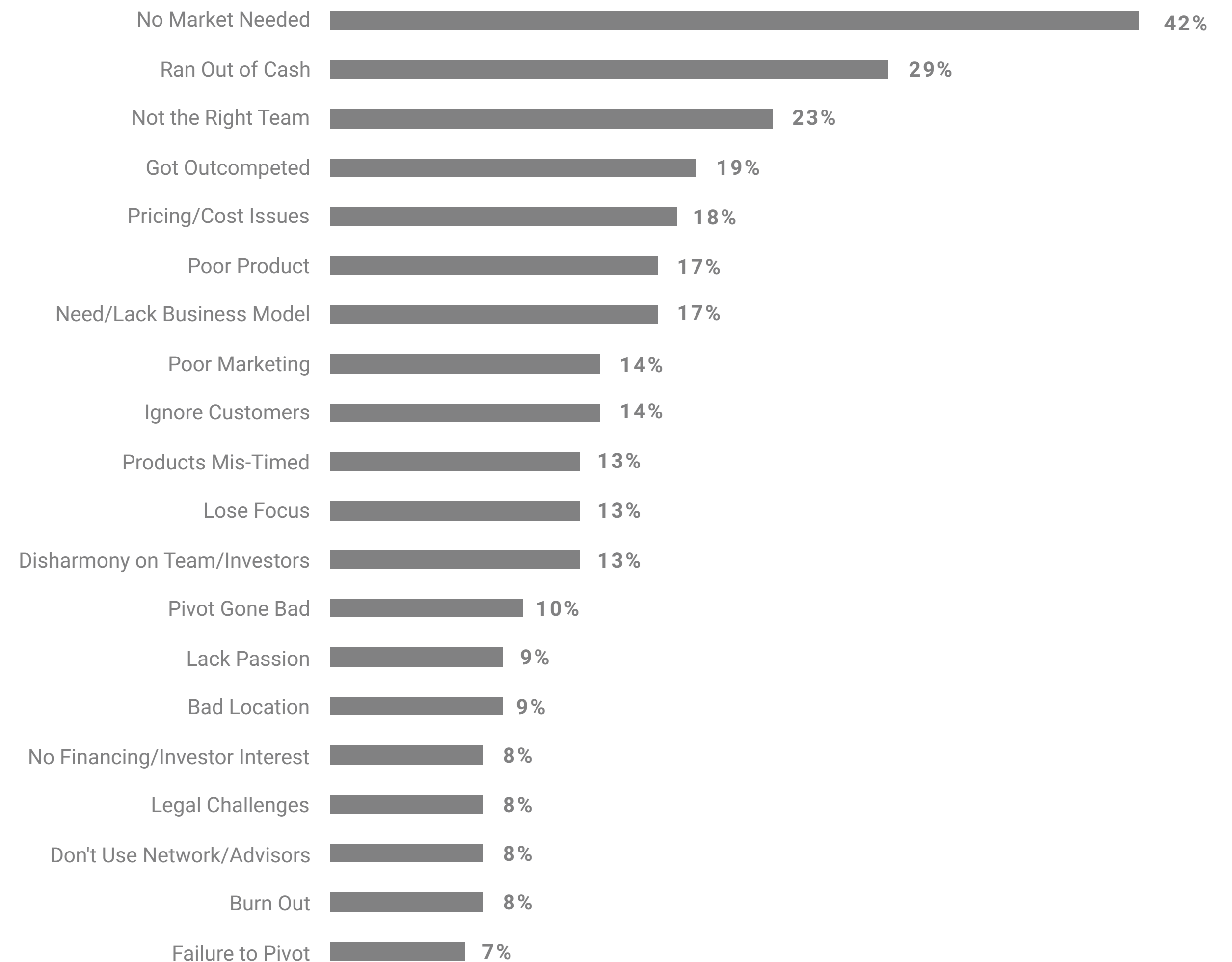


When ex-Apple designer and startup founder/CEO, Mark Kawano, was asked if he was glad that he launched Storehouse even though it closed in 2016, he responded unhesitatingly:

**“Absolutely.”** [↗](#)

## Top 20 Reasons Startups Fail

CB Insights / Anand Sarwal [↗](#)



# Fund\$

## The “Designification” of Venture Capital

Last year’s Design in Tech Report predicted that there would be more funds started by designers in the future. And with the launch of two new funds — one co-founded by designer Garry Tan and another to soon be announced — it appears that it’s already beginning.

### Early-Stage Funds that are Design and/or Inclusion Oriented\*\*

500 Startups  
Bloomberg Beta  
Collaborative Fund  
Cowboy Ventures  
Designer Fund  
Homebrew  
Kapor Capital  
KPCB Edge  
Rivet Ventures  
Slow Ventures  
Y Combinator

### Later-Stage Funds that are Design and/or Inclusion Oriented\*\*

Accel Partners  
Bessemer Venture Partners  
Google Ventures  
Greylock Partners  
Khosla Ventures  
Kleiner Perkins Caufield & Byers  
New Enterprise Associates  
Sequoia Capital  
True Ventures

\*\* have (or had) a designer on their team,  
or have a stated inclusion focus.

**NEW** Backstage Capital / March 2016

*Arlan Hamilton*

*“Hamilton is one of the first LGBT black women to start a venture capital fund.”* [↗](#)

**NEW** Initialized Capital / October 2016

*Alexis Ohanian and Garry Tan*

*“We’re founders who are engineers, designers, and product people.”* [↗](#)



# Trend: Designers Remain in High Demand

+65% Y/Y

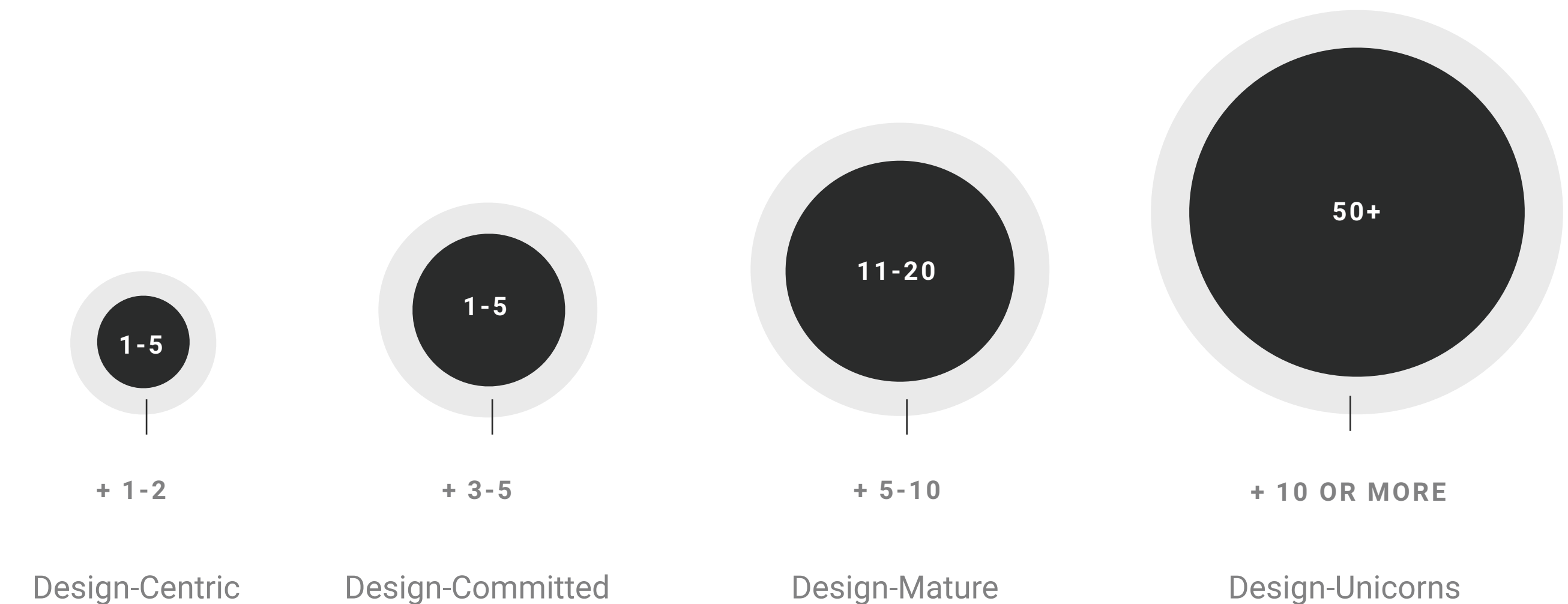
According to LinkedIn the highest echelon of the technology industry is vying for more design talent - Facebook, Google, and Amazon have collectively grown art and design headcount by 65% in the past year - with much headroom to hire more.



## SOURCE

NEA Future of Design Survey 2016 [↗](#)

● Current Number of Designers on Staff [Startups] ● Hiring Targets over next 12 Months [Startups]



**Design-Centric:** Design was “important” or “very important” to their business. **Committed:** Have a designer as a co-founder  
**Mature:** Have more than \$20m in funding and at least 20 designers on staff. **Unicorn:** Design-centric + Have a valuation in excess of \$1B.

# Trend:

Design Thinking  
Proliferating Into  
Business Schools

# 100%

Top business schools have student-led design clubs, which are pushing the curriculum in b-schools to shift as well.

“The fundamental profile of designers is beginning to shift as traditional markets begin to value design as a strategic lever.”

VIA KPCB VENTURED 

@kpcb @stanfordbiz @INSEAD @MITSloan @DardenMBA @HarvardHBS @BerkeleyHaas @yaleSOM @



STANFORD GRADUATE SCHOOL OF BUSINESS  
Design Thinking Bootcamp: From Insights to Innovation



HARVARD BUSINESS SCHOOL  
i-Lab Design Thinking & Innovative Problem Solving



INSEAD  
Innovation by Design Programme



Designers Jessica Helfand and Michael Bierut join the faculty of Yale SOM / July 2016



UC BERKLEY HASS  
Design Thinking for Business Innovation



UVA DARDEN  
Specialization in Design Thinking and Innovation



MIT SLOAN  
Product Design and Development



YALE SCHOOL OF MANAGEMENT  
Design and Management

# Trend:

## There's No Clear Winner Yet For Tools In Computational Design

"It's the Wild West for managing the files that designers generate. Dropbox is the clear winner, though GitHub does surprisingly well. Overall, it's clear that not a single design-specific solution has taken hold here."

KHOI VINH



**SOURCE**  
2015 Designer Tools Survey

What is your primary tool for interface design? (2015)

1. Sketch
2. Photoshop
3. HTML/CSS

What is your primary tool for prototyping? (2015)

- 1 HTML/CSS
- 2 Invision
- 3 Other

What tools do you use for project management? (2015)

- 1 Other
- 2 Slack
- 3 Trello

What tools do you use for version control and file management?(2015)

- 1 Dropbox
- 2 Github
- 3 Google Drive

### A New Generation of Computational Design Tools are Emerging



**SKETCH**  
2008



**INVISION**  
2011



**FRAMER**  
2014



**XD**  
2015



**FIGMA**  
2015



**ABSTRACT**  
2016

# Trend:

Creative Communities  
Are A Secret Ingredient

## Five

Creative community acquisitions  
in the last five years. There's  
likely going to be more.

*It's important to remember that creative  
communities are generally "not for sale" in a  
traditional way. Membership is primarily  
voluntary, and it is in the pursuit of a  
common good as the primary driving factor.*

Bigstock

Acquired: 2009  
Shutterstock

Muzli

Acquired: 2016  
Invision

Behance

Acquired: 2012  
Adobe

Deviant Art

Acquired: 2017  
Wix

Fotolia

Acquired: 2015  
Adobe

Dribbble

Acquired: 2017  
Tiny

# Trend: Designers Are Hungry For Capital

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80%

20%

Of designers surveyed would start a company if they had access to venture capital / other funding, in ranked order:

Are happy to NOT be funded.

1. **Product Studio** →
2. Consumer Startup
3. Enterprise Startup

“The Digital Product Studio blends three components: Consultancy, Venture & Own Product. Each feeds and informs the other in a powerful virtuous circle of network, experience, funding, brand, craft, and talent.”

JULES ERHARDT, IN 2016 STATE OF THE DIGITAL NATION 




# China


China Is A Major Force  
in Designer Co-Founded  
Companies


17 M

Designers in China with 0.5 million  
design graduates every year.



## Three Designer Co-Founded Chinese Companies Have A Combined Market Cap Of Over \$300B



Alibaba   
Two of the eighteen co-  
founders are designers



Visual China   
Four of the seven co-founders  
are designers



Xiaomi   
Two of the eight co-  
founders are designers

## Designer Co-Founded and Venture-Backed Startups Emerging In China

Meitu Xiuxiu   
A selfie photo editor  
app and platform  
zcool   
Design community and  
imagery resource sharing

Innomake   
Design-driven smart  
transportation project  
Mogujie   
An online fashion e-commerce  
platform and community

Youzan   
An e-commerce application  
in WeChat app store  
Xiachufang   
A community to share  
cooking recipes

Taihuonao   
A design-driven innovative  
community and incubator  
Tezign   
A platform based design  
and creative talent solution

# China

## Four Trends From A Designer CEO's Viewpoint

### QR Codes

WeChat embeds QR code reader as the most frictionless means for offline interaction. Offline interactions let you easily LATER scan QR code for payment, visiting a site, adding a friend, etc.

### Voice

WeChat lets people leave up to 60 second voice messages. People are holding the speak button on WeChat and speak to the cell phone everywhere. It's leading to micro classes, and micro Q&A apps.

### FU × AR 福

In the spring festival just passed, 1 billion Chinese mobile users scan the Chinese character "福 (good fortune)" that appears in offline scenes to collect "福" in Alipay.

### Transportation

Hub-less bicycle sharing has become app-enabled so you can pick up a bicycle anywhere. the app unlocks the bike with its built-in chip, solid tires, and is chain-less.

“... software makers in China are far from being mere hawkers of pale, tasteless knockoffs forced onto the unsuspecting public living behind the Firewall.”

DAN GROVER, IN *MORE CHINESE MOBILE UI TRENDS* 

# Design Needs Designers

“

Capital is being superseded by creativity and the ability to innovate — and therefore by human talents — as the most important factors of production. If talent is becoming the decisive competitive factor, we can be confident that capitalism is being replaced by ‘talentism’...

-KLAUS SCHWAB

Founder of the World Economic Forum [↗](#)



# Trend: The Future Of Design Is Digital

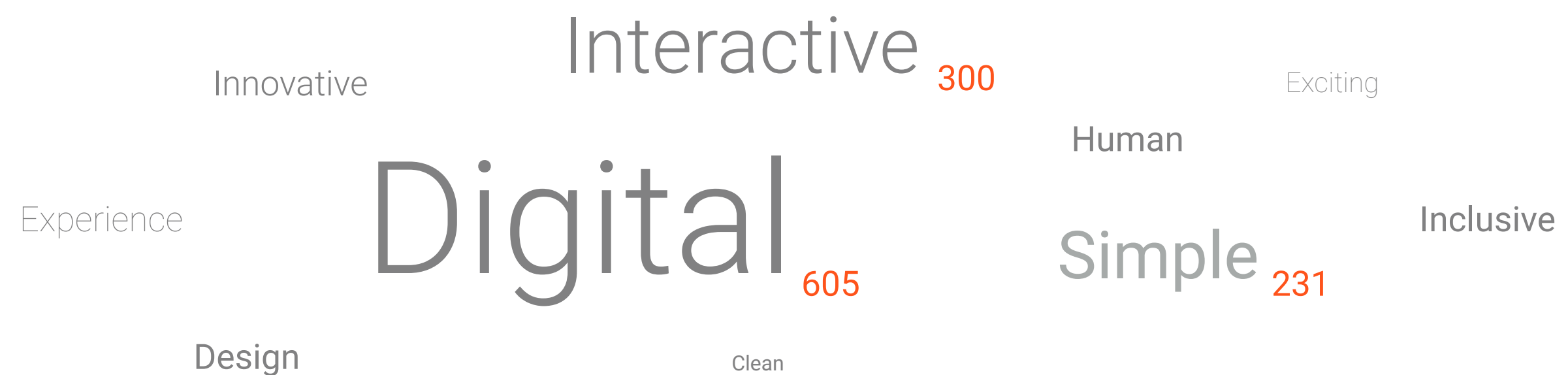
In 2016, the largest US-based national designer association AIGA issued a study in collaboration with Google to reveal a sentiment shift for its future towards digital and interactive forms of design.



## SOURCE

AIGA x Google Design Census 2016 

Top 10 words to describe the Future of Design  
Size is proportional to *popularity*



## LEAST SATISFIED DESIGNERS

Publishing (74%), Print Design (74%),  
Architecture (71%)

## MOST SATISFIED DESIGNERS

Industrial/Product Design (83%), Brand Strategy (82%),  
Digital Design (82%)

# Accelerated Learning:

Teaching Yourself Online

86%

of students surveyed say they learned their digital skills from resources outside their coursework.

The average program in design's primary area of expertise lies in Classical Design instead of *Computational* Design. Furthermore, their traditional emphasis is on individual creation (versus teamwork), intuition-driven work (versus testing), and eschewing business thinking (as equivalent to "selling out").

## Free Options



HIGH RESOLUTION

Design.blog

WIZELINE™

## Inexpensive Options

lynda.com 

YouTube

 PLURALSIGHT

Google



## Tuition Options



SCAD

# More than Design:

Code is not the only  
unicorn skill

## Programs

Design Schools that include Writing  
degrees or offer Writing and Content  
Strategy focused coursework

1. School of Visual Arts IxD MFA [↗](#)
2. Otis College of Art and Design MFA [↗](#)
3. Ringling College of Art and Design BFA [↗](#)
4. Savannah College of Art and Design BFA/MFA [↗](#)

## Verbal Design

“We talk about the power of words – both content and style – all the time. When it comes to friendships, romance, work dynamics, and, dare we even mention it – though nothing is more telling, more relevant – politics, words have the power to change our opinions, incite action, divide or unify us, move us. Words can shape reality.”

JENNIFER VAN [↗](#)

## Words as Material

“I think of design as a process of articulation. We join together to express an idea in a coherent form. We bring ideas to life. We connect the dots or build bridges for our users. That often means being specific about what a product does, who it’s for, why it matters, and how it works. We have to trek through a pile of ambiguity to do this.”

NICOLE FENTON [↗](#)

## Why UX Design is a Lot Like Writing

“Here’s where I’d like to draw the parallel with writing – because a core skill of the interaction designer is imagining users (characters), motivations, actions, reactions, obstacles, successes, and a complete set of “what if” scenarios.”

SUSAN STUART [↗](#)

# The Design Education Gap:

Acquiring Data, Business, and Leadership skills beyond the classroom

The top 3 skills needed by designers in practice are not available to them as basic coursework in education as a designer.

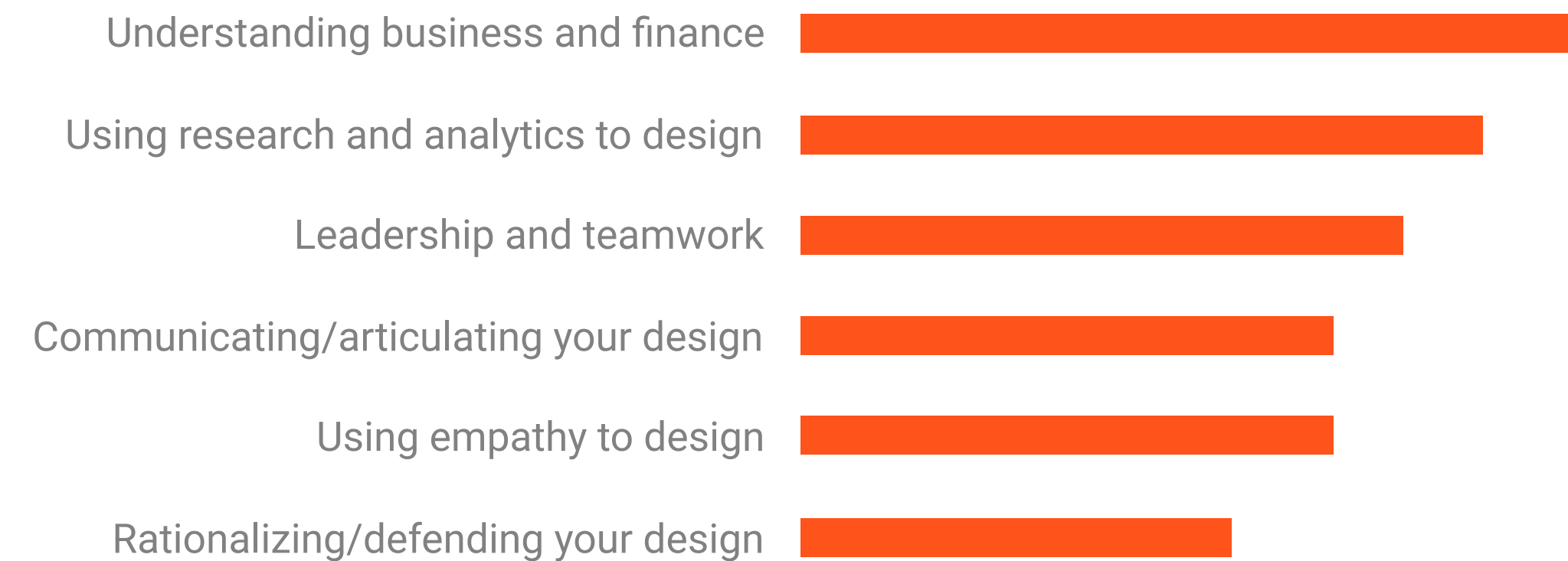


**ROCHELLE KING**  
Designing with Data

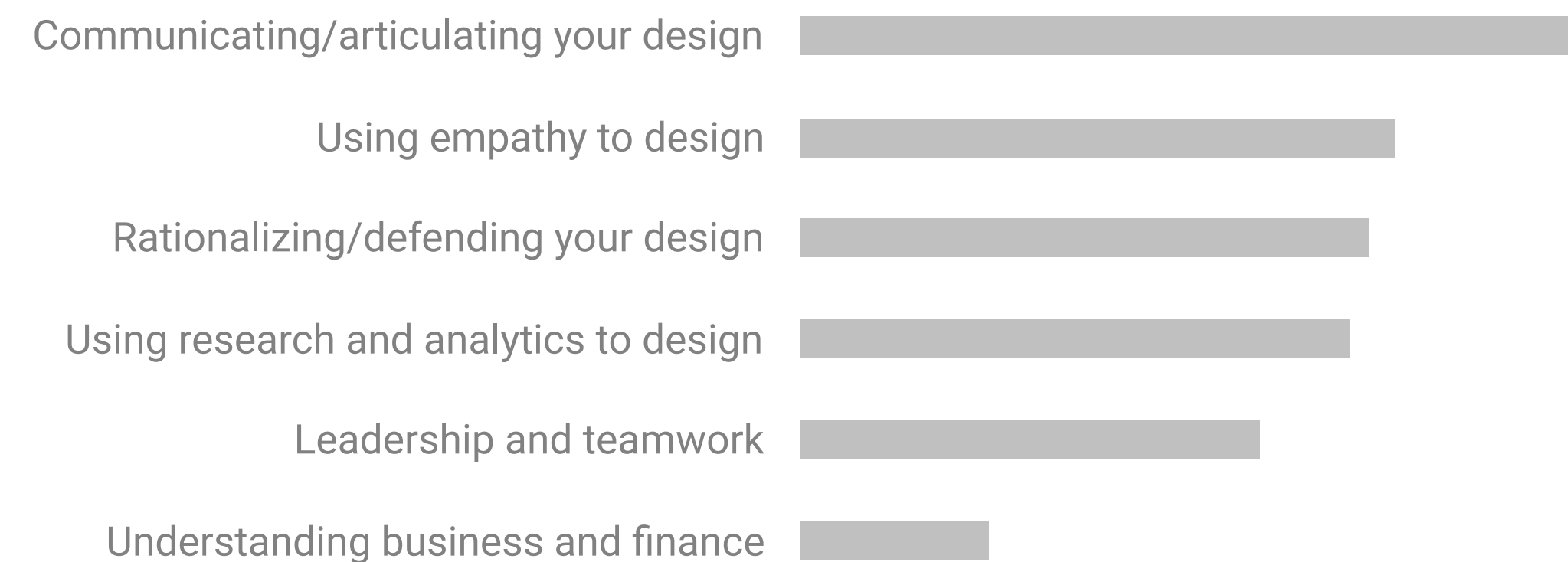


Business and finance skills are desired the most by graduates, + research and analytics skills too.

## Desired design education biases



## Existing design education biases



# Orgs:

There's No Single,  
Perfect, Design  
Organizational Structure

# 46%

of designers surveyed say that their  
highest ranked design leader reports  
to the CEO. 2nd highest (at 31%) is  
VP/Head of Product.

## Simple

### COMPANY A

Design Leader

- Junior/Associate Designer
- Designer
- Senior Designer
- Lead Designer
- Principal Designer
- Design Fellow

Types of  
positions  
and levels

## Research + Content

### COMPANY B

Design Leader

- Experience Designer
- Senior Experience Designer
- Manager, Experience Design
- Director, Experience Design
- Experience Researcher
- Senior Experience Researcher
- Manager, Experience Research
- Director, Experience Research
- Content Experience Designer
- Content Strategist

## Research + Content + Marketing

### COMPANY C

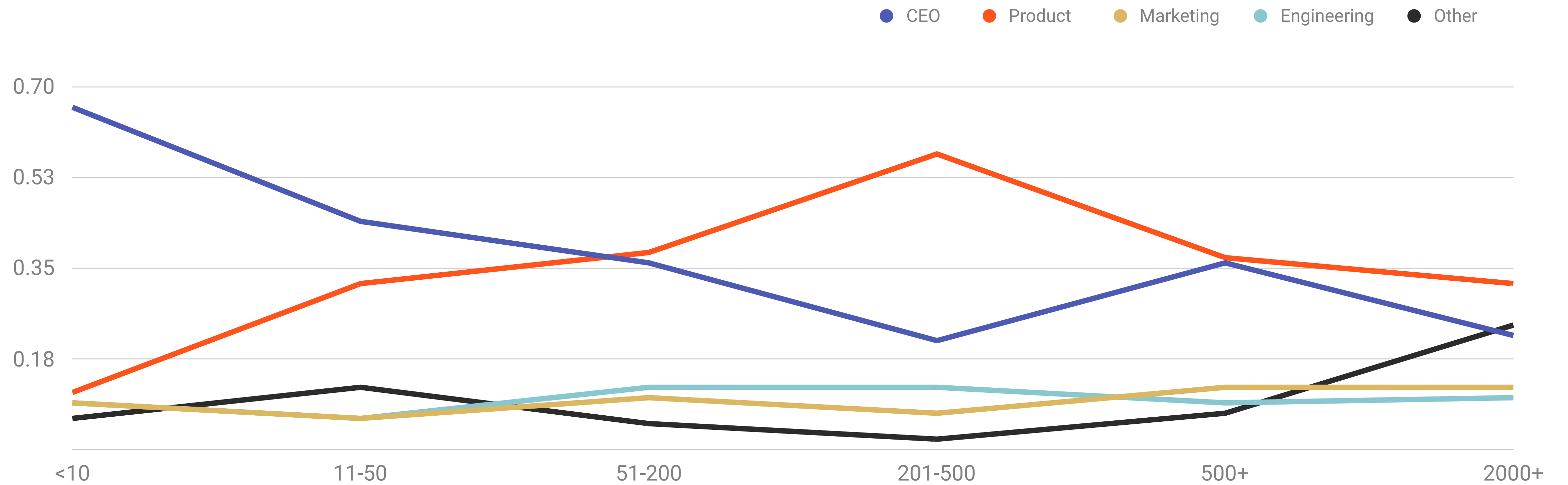
Design Leader

- Creative Director
- Senior Creative Director
- Art Director
- Senior Art Director
- Illustration Director
- Brand Designer
- Product Designer
- Senior Product Designer
- Product Design Manager
- Product Design Director
- User Experience Researcher
- User Experience Research Manager
- User Experience Research Director
- User Experience Strategist
- Copywriter
- Product Copywriter

Types of  
functions  
spanned

# Orgs:

Where Design Reports Changes  
Based Upon Company Size



# Orgs:

From Annual  
Design In Tech Report  
Sentiment Survey

70%

Of agencies have a single holistic design team that includes designers who focus on brand/comms/marketing.

50%

Of companies have a single holistic design team. The other half splits designers across marketing and product.

## Impact and lacking challenging work is the #1 factor for designers switching jobs



## Average Tenure

Agency = 4 years

In-House = 2.4 years

Independent Contractors = 3.8 years

# Shaping Voice

“

I don't make songs for free.  
I make them for freedom.

CHANCE THE RAPPER

*Blessings* in Coloring Book, 2016





# Blogs Brought New Voices To The Web

23      50M

Blogs  
1999

Blogs  
2006

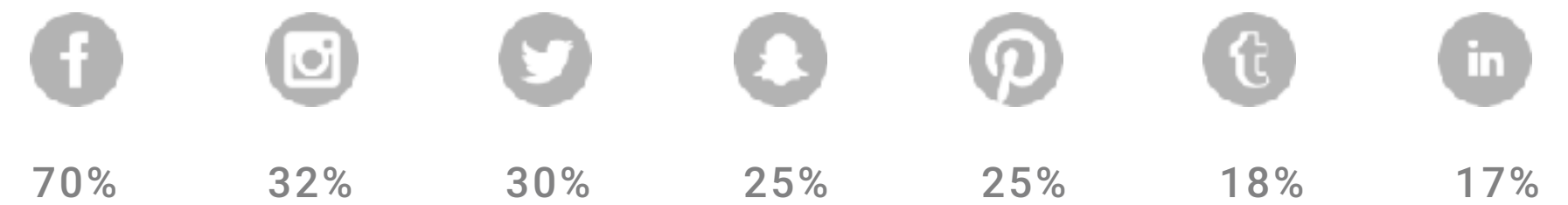


Social media  
= blogging

2017

The democratization of influence

Weekly Usage by Percentage



27% of the internet is powered by WordPress

# Design is:

Less Open These Days

## 8 of 10

Smart phone apps are owned by Google or Facebook, and when mobile devices are used there is **20%** chance the person is engaging the Facebook app.

“The open architecture of the web led to an incredible era of experimentation. Many startups were controversial when they were first founded. What if AOL or some other central gatekeeper had controlled the web, and developers had to ask permission to create Google, YouTube, eBay, Paypal, Wikipedia, Twitter, Facebook, etc. Sadly, this is where we’re headed on mobile.”

CHRIS DIXON

“The Decline of the Mobile Web” 

# Design is:

Attention to Detail, but  
Context is Everything

Design is concerned with all the details that make an experience something that is spectacular and memorable. That said, these days it isn't an easy task to achieve given how devices can vary and how browsers can interpret code in a variety of unpredictable ways. But the greater context in which these experiences come to be need to be considered.

## Variability in Browsers

IE	Edge	Firefox	Chrome	Safari	Opera	iOS Safari	Opera Mini	Android Browser	Chrome Android
			55			9.3		4.4.4	
11	14	51	56	10	43	10.2	ALL	53	56
	15	52	57	10.1	44				
		53	58	TP	45				
		54	59						

Using [caniuse.com](http://caniuse.com) to see if a particular CSS descriptor works across browsers.

## Variability in Devices



How and whether people hold different device types, by [Steven Hooper](#)

# Design Is Not Just For Our Five Senses

Often in how design is talked about with regards to the screen, the topic of “how it looks” dominates the main discussion. However, the one design trend with the most significance today for web content creators is an invisible one: *Will my page get found?* Which means designing for the non-human viewer, too.



## SOURCE

2017 Design Trends Guide [↗](#)

## Design Trends

Authors: Loredana Papp-Dinea | Co-Author: Mihai Baldean

Semi-Flat Design	1	Custom Graphics and Illustrations	10
Cinemagraphs	2	Creative use of neutral space and Grid	11
More 3D	3	Storytelling	12
Animations	4	Lazy Loading	14
Landing Pages	5	Split Content	15
Geometric Shapes	6	Full-Screen Forms	16
Courageous Colors	7	Videos Everywhere	17
Innovative Scrolling and Parallax	8	<b>SEO is Important</b>	<b>18</b>
Color Transitions	9	<b>Designers are not only optimizing for user experience, but are simultaneously optimizing for non-human experience.</b>	
Mobile Browsing	10	Hidden Navigation	19
		Tiny Design Details	20

# Design is:

Now A Lot of Talk

Chat-based interfaces are grounded in mental models that don't require a complex graphical representation and navigation system.

394

Chat Services listed on

 Product Hunt

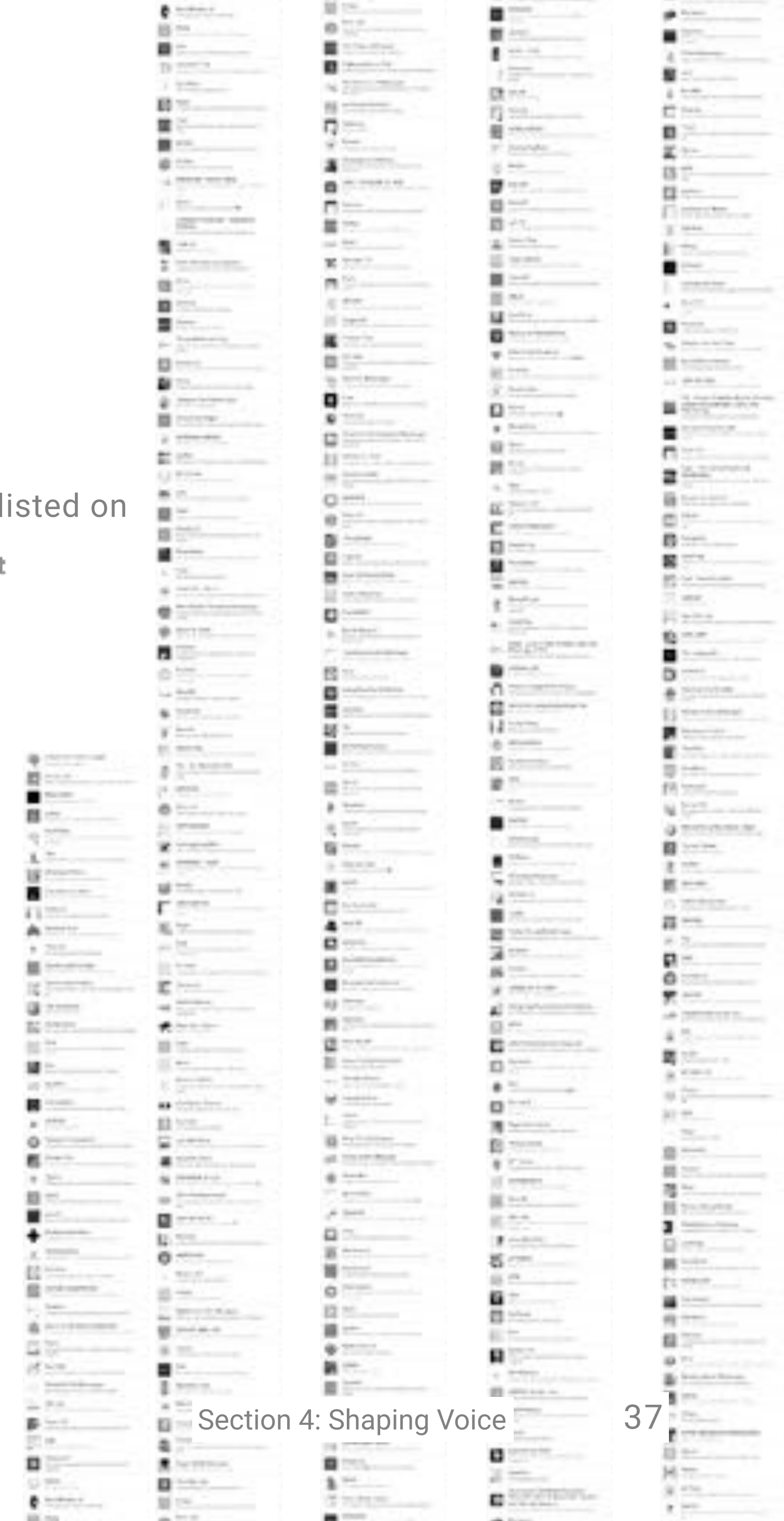
1B

Facebook Messenger Users


846M


WeChat Users

Conversational interfaces are grounded in the original CLI (Command Line Interfaces) and are a bit retro, but effective.



# Design Is The Computer, Attentive To You

Put That There  
for DARPA   
CHRIS SCHMANDT [1981]


“Voice will **not** replace  
the screen”  
JAKOB NIELSEN [2003] 


Prior to 2012, the average error rate for image recognition was 28% and for speech recognition it was 26%. After ML, the average error rate for image recognition became 7% and for speech reco 4%.


The Arrival of Machine  
Learning  
BENEDICT EVANS [2012] 


5.3M

Amazon Echo's sold  
AMAZON.COM [2016]

 Ellen talks with Siri  
(2012)

 IBM Watson wins  
Jeopardy (2013)

 A news anchor accidentally  
ordered items for viewers with the  
device. —via CNN (2016)

 Adobe exploring what digital  
photo editing via voice. —via  
YouTube (2017)

# Help

# Wanted:

Designers In Security

\$150K—200K/yr

The cost for protection against a sophisticated DDoS attack. For an individual journalist, it's a prohibitive one that threatens the future of the Open Web. [↗](#)

Today's connected technology products and services make us more vulnerable than ever before - it's incumbent upon designers to build product features and UX that call out and protect against those vulnerabilities for end users. Bottom line — you don't need to be a cyber expert to be a designer in security. *Learn more about non-profit organization Simply Secure.* [↗](#)

“Privacy and security matter, and if you care about any part of the Internet then you need to care about security, because there are so many risks — including IoT related risks these days. Designers are needed to make the complex challenges of security actionable and understandable. It's a great opportunity for design leadership: complex problems with multiple stakeholders and an urgent need for human-centered thinking.”

AME ELLIOTT

Design Director of Simply Secure 

# Design Is By Nature Inclusive

“

By recognizing *exclusion* we can start to build empathy for people who interact with unwelcoming designs every day of their lives.

KAT HOLMES, IN *DESIGN.BLOG*

Principal Design Director, Inclusive Design at Microsoft



# A Shift:

## Moving towards inclusivity

Historically speaking, technology products weren't designed with inclusivity in mind because the users of the products were generally the makers of the products. The number of people using computers used to be very small. However today, due to smart phone proliferation, everyone is now using computers. To design for everyone, we need to now think and work more inclusively than ever before.

July 2015

Google Mistakenly Tags Black People As "Gorillas" Showing Limits Of Algorithms. [↗](#)

**ALISTAIR BARR**  
The Wall Street Journal

June 2016

More Airbnb Customers Are Complaining About Racism. [↗](#)

**A.W.**  
The Economist

Aug 2016

Clearly Snapchat Doesn't Get What's Wrong With Yellowface. [↗](#)

**DAVEY ALBA**  
Wired

→ Aug 2016

How Nextdoor reduced racist posts by 75% [↗](#)

**KASHMIR HILL**  
Fusion

Sep 2016

Airbnb CEO: "Bias and Discrimination Have No Place" Here. [↗](#)

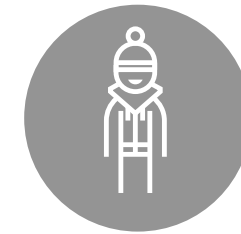
**ALEX FITZPATRICK**  
Time

## Survey

Companies trending upwards in design perception:

1. Airbnb
2. Google
3. Slack
4. Microsoft

# A Tool: Microsoft Inclusive Design Toolkit



Alone



With coworkers



In a crowd

**Frame | Persona Network**

**Purpose**  
To consider design challenges in terms of someone's personal ecosystem.

**Instructions**

1. With a particular person in mind, make note of who they interact with every day. Who do they rely on? Trust? Enjoy?
2. Draw a map of the person and their key interactions with 3-5 people. Include the different types of interactions that typically take place, such as making plans for dinner or going to work.
3. List the mismatches between the person and their environment.

**Materials**  
The social context support card  
Note taking supplies

**Tips**  
There's no one "right" way to map the network. Do what makes sense for your creative process.  
Do this activity after learning about the challenges, enablement, successes, and motivations of a person(s) with a permanent disability.

**Inclusive**

**Iterate | Simulations**

**Purpose**  
To reveal opportunities for improving your solution by simulating temporary and situational limitations.

**Instructions**

1. Write the sequence of steps a user will take in your solution.
2. From the Temporary/Situational Limit support card, choose one limitation.
3. Recreate this limitation for yourself.
4. Go through the sequence of steps you wrote in #1.
5. Note what could be improved.
6. Adjust your design.
7. Repeat with other limitations from the Temporary/Situational Limit support card.

**Materials**  
Temporary/Situational Limit support card  
A prototype (low to high fidelity).

**Tips**  
Build your solution by creating low to medium fidelity prototypes. Examine and define what you want the interactive experience to be holistically and from a micro-view.  
Iteration takes into consideration the full Persona Spectrum and what's appropriate physically, contextually, environmentally, and socially for the person(s) involved.

**Inclusive**

**Ideate | Mismatch to Solution II**

**Purpose**  
To generate design concepts based on inspiration from mismatched interactions.

**Instructions**

1. From the list you generated in Mismatch to Solution I, pick the three you're most interested in.
2. As individuals, use the first idea and brainstorm for 3-5 minutes to generate a list of possible solutions. Write the solutions on sticky notes. One idea per note.
3. Repeat step #2 with your next.
4. If you're in a group, share your ideas and group them in clusters of like ideas. Or filter the ideas according to what you'd like to work on as a team.

**Materials**  
Examples of Mismatch support card  
Sticky notes, pens

**Tips**  
Place emphasis on generating a volume of ideas before clustering and filtering.  
Start the activity with a one-minute ice breaker that illustrates how much can be accomplished in a one-minute brainstorm session. Give participants a word like "jump" and ask them to write down their associations with the word.

**Inclusive**

15,000+

Downloads of the Microsoft's inclusive toolkit since September of 2015, with 23% of those downloads occurring since the start of the year. The toolkit consists of the manual, activities, and videos that have been used to facilitate a range of workshops on *inclusive design* in South America, Asia, Europe, and all over the United States. [↗](#)



IBM's Accessibility Handbook has had > 50K views and 10K paper copies distributed to date. [↗](#)

# Inclusive Design is Good Business

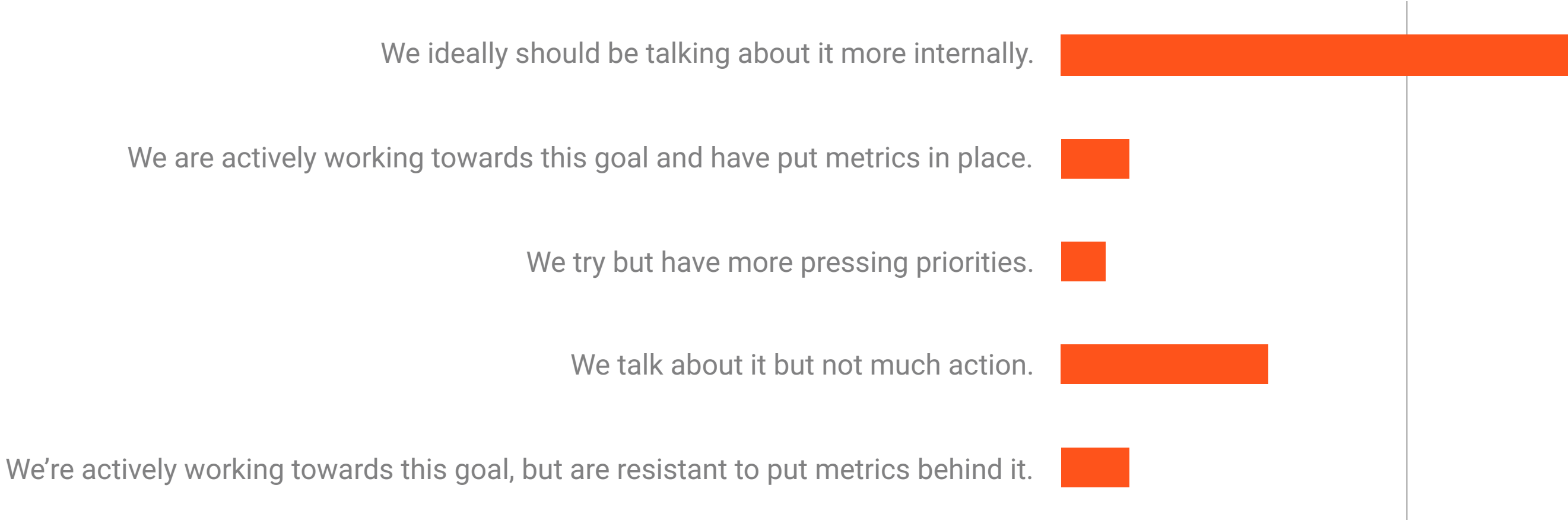
90% *Is having a more diverse design team important to you, personally?*



Of designers surveyed answered YES.  
8% were INDIFFERENT. 2% were NO.

As products and services in our lives become more personalized, there is a growing need for the teams that build products to look and feel like the users on the other side. Recruiting and retaining diverse teams is essential for inclusive design — it's more important than ever before.

2016 DESIGN IN TECH REPORT



## The Conversation

"We're already very diverse. When diversity becomes part of the culture you don't have to manufacture it."

"We haven't talked about this and there are more pressing priorities."

"It's very diverse already and we're pushing design into completely uncharted areas in terms of geography and industry."

"Biggest issue is diversity outside of the design team. Design team is not the problem."

“

One of the things I have learned about effective decision making is that the best decisions are often made by diverse groups of people. Saying or hearing these words is magic: That's really interesting, I had never thought of it that way before. Thank you.

MARY MEEKER

Internet Trends Report Founder and KPCB Partner

# Thank you to all of our contributors

Kristy Tillman, Randy Hunt, Maria Giudice, Tom Berno, Kate Carmody, Andrew Crow, Audrey Liu, Bob Baxley, Bobby Goodlatte, Catherine Courage, Craig Villamor, Genevieve Conaty, Helena Price, Jackie Goldberg, Johanna Evans, Johnnie Manzari, Josh Brewer, Joshua Goldenberg, Kaaren Hanson, Malthe Sigurdsson, Marcos Weskamp, Mark Kawano, Matt MacQueen, Megs Fulton, Mike Kruzeniski, Morgan Knutson, Paco Vinoly, Paul Stamatiou, Robert Padbury, Ryan Donahue, Tom Suiter, Vanessa Cho, Wesley Yun

Aaron Irizarry, Nick, Abhishek Jayaprakash, Anderson Bordim, Adam, Adam Leon, Adam Williams, Adam Cricchio, Alberta Soranzo, Albert Kim, Alex Moffit, Alexandra Fiorillo, Alex Rothera, Alexander Ryan, Alexis Lucio, Alfred, Algert Sula, Ali Ndlovu, Ame Elliott, Amelia Abreu, Ana N., Andric, Andy Wright, Andy Van Solkema, Andy Vitale, Angela W, Angel Ceballos, Angelos Arnis, Anirudh B Balotiaa, Ann, Anne Mieke, Anthony Miles, APB, Jonathan Arena, Arnaud Carrette, Ashley, Ashok, Abhijit Thosar, Ayelet Segal, Bill Bernahl, Ben Wolstenholme, Bernardo, Laurence Berry, Beth Berrean, Emanuele Bianchi, Blake Brown, Bob van Luijt, Nathaniel Bolton, Brady, Bruno Pedro, Brad Baer, Brady, Brandon Kirk, Nick, Brian, Bruce Nussbaum, Bryan Sattler, Ben Stanfield, Brian Tran, Brent Turner, Julius Santiago, Burhanudeen, Calvin Robertson, Camilla Dahle, Camilo, Carina Ngai, Carla Rocha Morais, Carlos Alonso Pascual, Carlos, Christine Armstrong, Christine Donahue, Chacko Poothicote, Arnab Chakravarty, Leslie Bayona, Chris Messina, Chris Henderson, Christian Talmage, Chrystia Chudczak, Ciara Peter, Clare, Claudio Lobos, Christopher McCann, Camilla, Gabriel, Colin Johnston, Iulian, Prince Boucher, Chris Purcell, Cristian Mazzeo, Ben Lee, Connor Soltas, CR, David Linssen, Daniele Vitali, Daniel Harvey, Daniel, Daniel R Farrell, Daniela Nuñez, Dario Alberto Henke, Darren Jonathan Mc Nelis, Dave Poore, Dave, David Alegria, David Meyers, David de Céspedes, Dave Fisher, Dawn Danby, Dee Sadler, Dennis Eusebio, Emily, Devesh Yadav, Dezzie, Dirk, Daniel Schwartz, David Miyabe, Deanna, Dom Crockett, Dorelle Rabinowitz, Doug Morwood, Douglas Smith, Doug Tomczik, Duane King, Ducnan Robertson, David Witt, Dylan Evans, Eric A. 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What is Design? It's about business. It's about people. It's about technology. It's now about digital technology — which touches a lot of people. And it's now about a lot of people unlike yourself since it is in the *millions* of people. Because it involves so many people today, design responsibly.

Valerie Casey invites you to start a Creative Power Day in your community [↗](#)

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The presentation relies on data and insights from a wide range of sources, including public and private companies, market research firms, and industry professionals. We cite specific sources where data are public; the presentation is also informed by non-public information and insights.

This is the third publication of the Design In Tech report. We will post any updates revisions or clarifications at

<https://designintechreport.wordpress.com>

Please report any errors to @johnmaeda on Twitter. Thank you!

John Maeda has minor equity positions as an investor in certain companies referenced in the presentation [maedastudio.com/startups](http://maedastudio.com/startups).