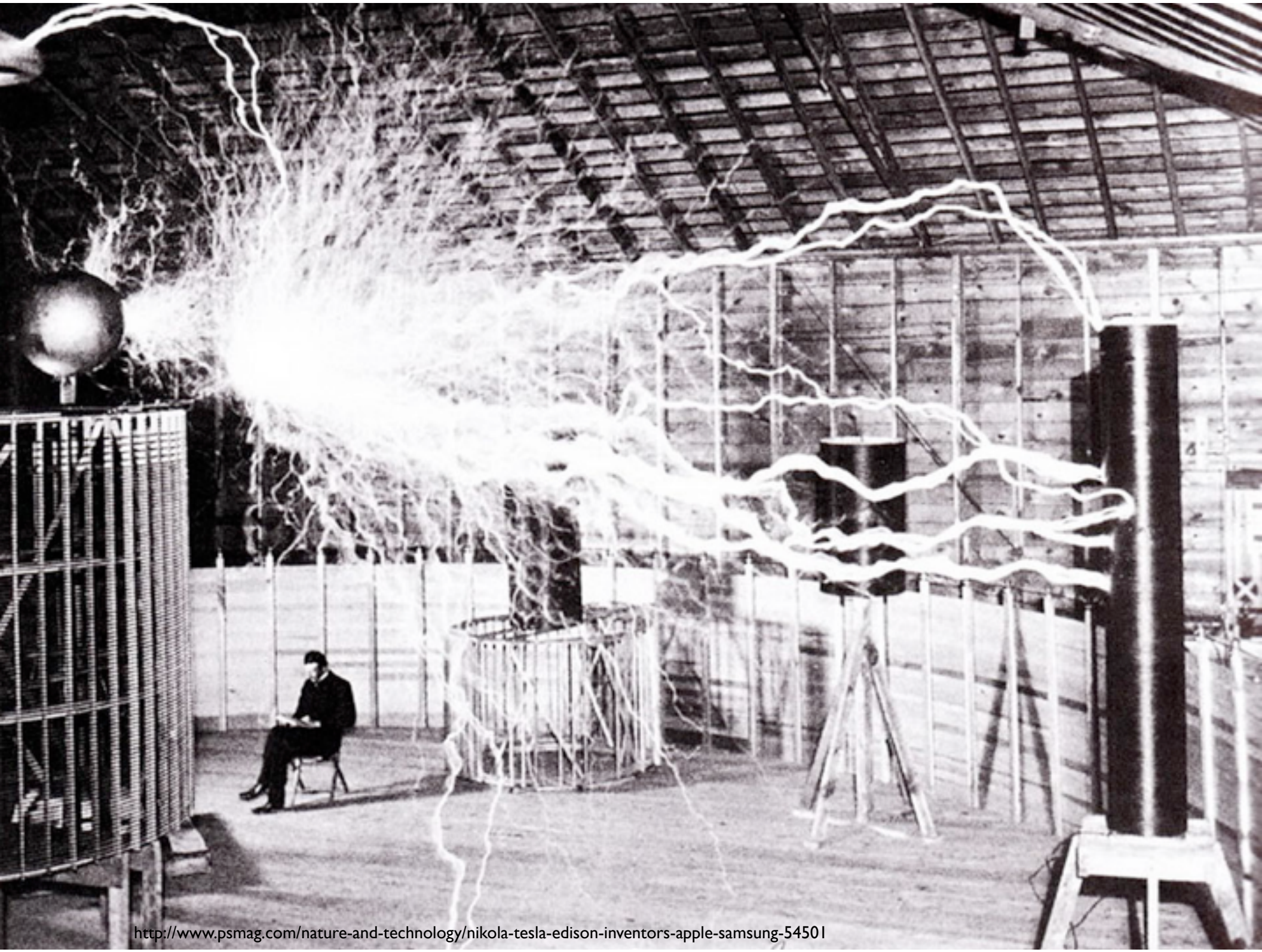
Advancing Collective Innovation

Steven Dow
Associate Professor
Cognitive Science
UC San Diego

PROTOLAB

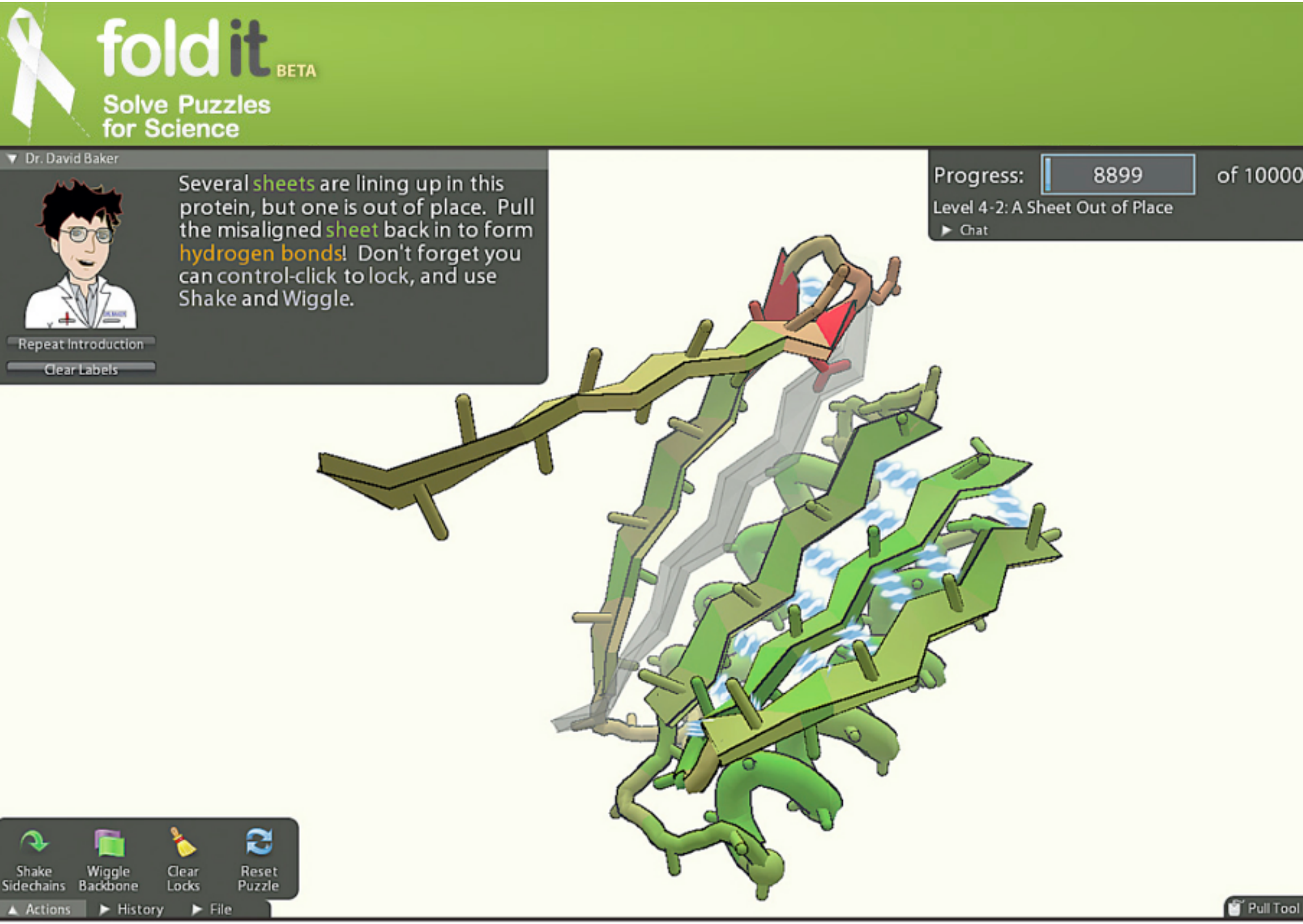
UC San Diego
The Design Lab



http://www.psmag.com/nature-and-technology/nikola-tesla-edison-inventors-apple-samsung-54501

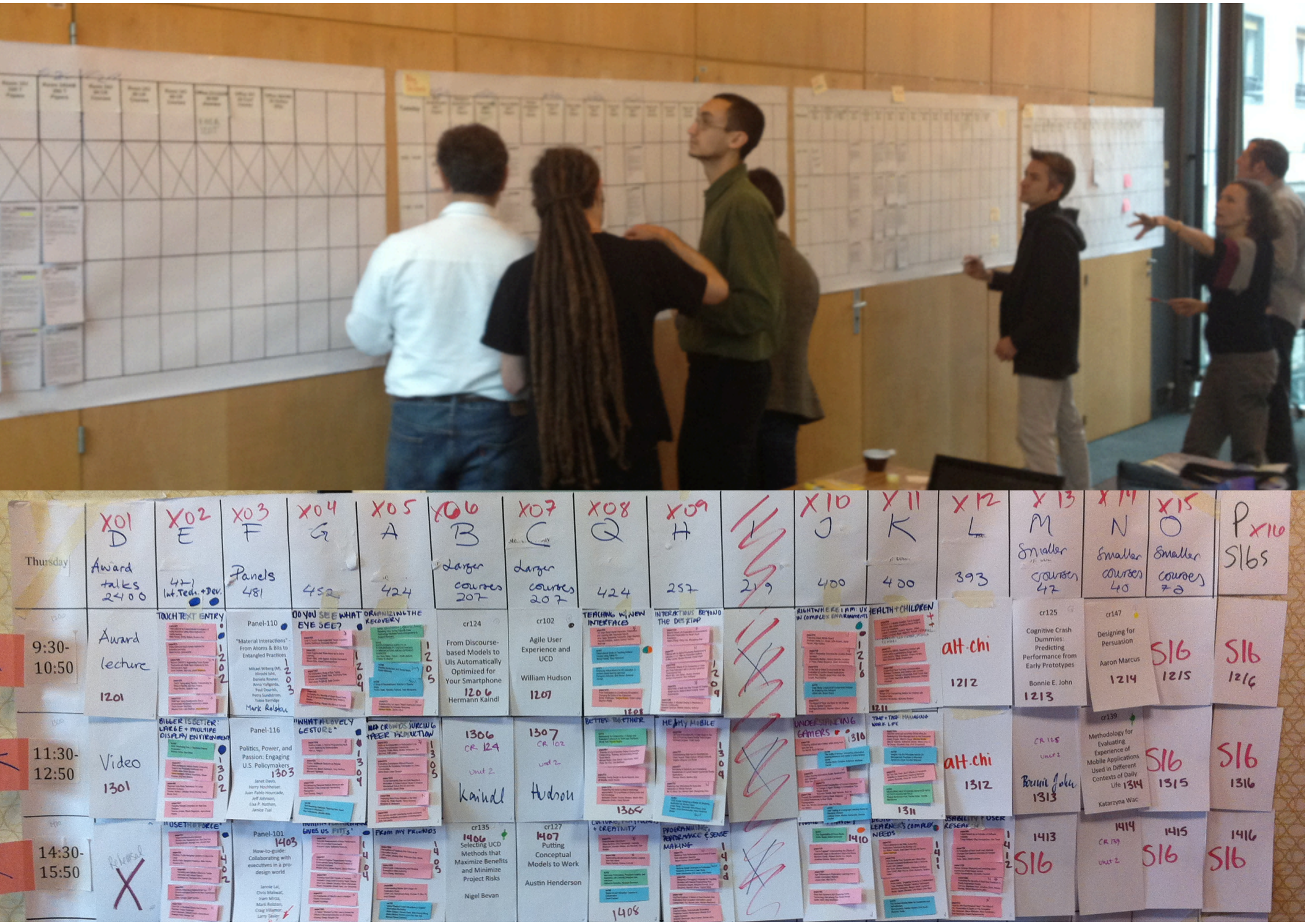
WIKIPEDIA
The Free Encyclopedia


ENGLISH | POL
GALAXY ZOO .org
Hi starstryder
Home
The Science
How to Take Part
Galaxy Analysis
Forum
Press
Blog
FAQ
Links
Contact Us
Logout
Profi
Galaxy Tutorial
Galaxy Analysis
Galaxy Zoo - Thank You
Show My Galaxies
Galaxy Analysis
Welcome to Galaxy Zoo's view of the Universe. If you're here you should already have seen the Tutorial, but feel free to go and remind yourself. There's no need to agonise for too long over any one image, just make your best guess in each case.
Galaxy Ref:
587729387677679742
Choose the Galaxy Profile by clicking the buttons below
CLOCK
ANTI
EDGE ON/ UNCLEAR
SPIRAL GALAXY
ELLIPTICAL GALAXY
STAR / DON'T KNOW
MERGERS
Show Grid Overlay on the next Image


fold it BETA
Solve Puzzles for Science
Dr. David Baker
Several sheets are lining up in this protein, but one is out of place. Pull the misaligned sheet back in to form hydrogen bonds! Don't forget you can control-click to lock, and use Shake and Wiggle.
Repeat Introduction
Clear Labels
Progress: 8899 of 10000
Level 4-2: A Sheet Out of Place
Chat
Shake Sidechains
Wiggle Backbone
Clear Locks
Reset Puzzle
Actions
History
File
Pull Tool

Supporting Collective Innovation

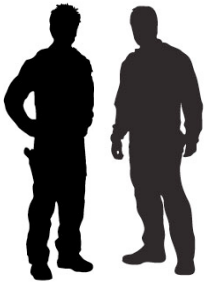
How can we harness collective intelligence, effort, and creativity to innovate on complex problems?


Thursday
X01 D
X02 E
X03 F
X04 G
X05 A
X06 B
X07 C
X08 Q
X09 H
X10 J
X11 K
X12 L
X13 M
X14 N
X15 O
P X16
Award talks 2400
Panels 481
452
424
Larger courses 207
Larger courses 207
424
257
219
400
400
393
Smaller courses 42
Smaller courses 40
Smaller courses 28
S16s
9:30-10:50
11:30-12:50
14:30-15:50
Award lecture 1201
Video 1301
Panel-110
Panel-116
Panel-101 1403
cr124
From Discourse-based Models to UIs Automatically Optimized for Your Smartphone 1206 Hermann Kaindl
cr102
Agile User Experience and UCD
William Hudson 1207
1306 CR 124 Kaindl
1307 CR 102 Hudson
cr135 1406 Selecting UCD Methods that Maximize Benefits and Minimize Project Risks
Nigel Bevan
cr127 1407 Putting Conceptual Models to Work
Austin Henderson
alt.chi 1212
alt.chi 1312
cr125 Cognitive Crash Dummies: Predicting Performance from Early Prototypes
Bonnie E. John 1213
cr147 Designing for Persuasion
Aaron Marcus 1214
cr139 Methodology for Evaluating Experience of Mobile Applications Used in Different Contexts of Daily Life 1314
Katarzyna Wac
S16 1215
S16 1216
S16 1315
S16 1316
S16 1413
S16 1415
S16 1416

Wicked problems (Rittel and Webber 1973)

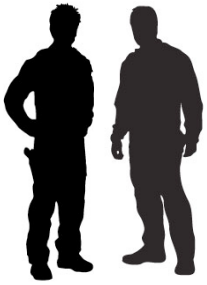
Wicked problems (Rittel and Webber 1973)

- The solution depends on how the problem is framed and vice versa (i.e., the problem definition depends on the solution).
- Stakeholders have radically different world views and different frames for understanding the problem.
- The constraints that the problem is subject to and the resources needed to solve it *change* over time.
- The problem is never solved definitively.

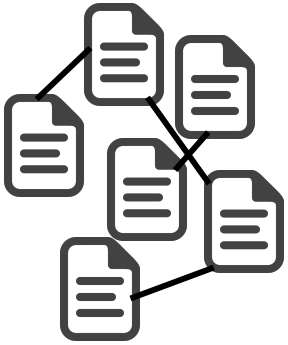


CONFERENCE
CHAIRS

projectCOBI.com

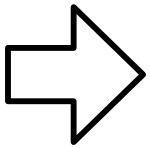


CONFERENCE CHAIRS



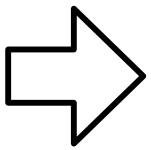
PROGRAM COMMITTEE

~200 PEOPLE



AUTHORS

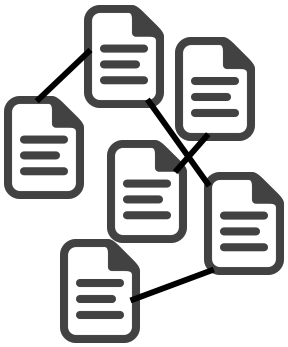
~1000 PEOPLE



ATTENDEES

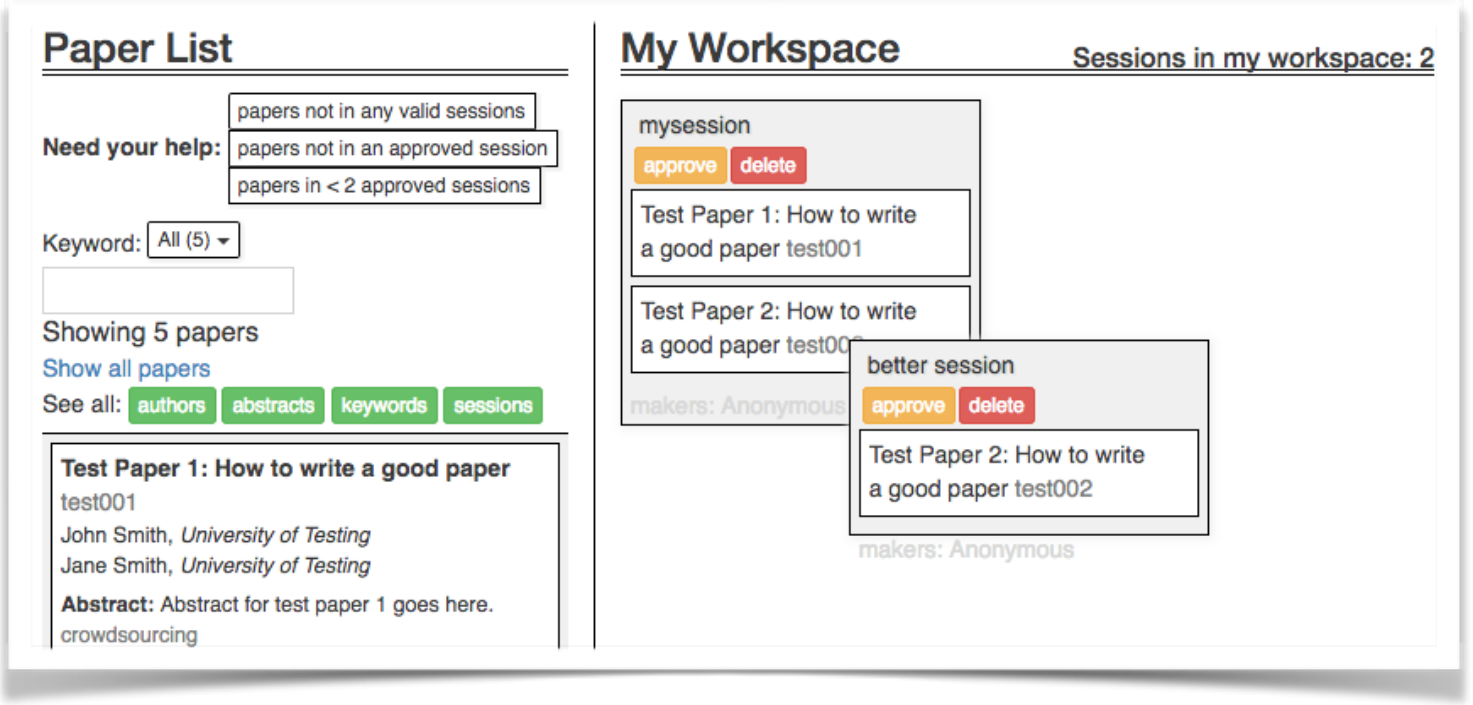
~3500 PEOPLE

projectCOBI.com



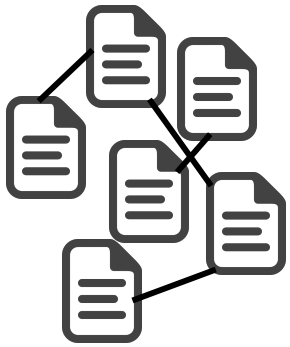
PROGRAM COMMITTEE

~200 PEOPLE



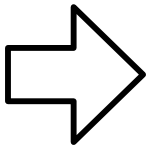
Community Clustering: Leveraging an Academic Crowd To Form Coherent Conference Sessions, Paul André, Haoqi Zhang, Juho Kim, Lydia Chilton, Steven P. Dow and Rob Miller. AAAI Conference on Human Computation and Crowdsourcing, 2013. (Notable Paper Award)

projectCOBI.com



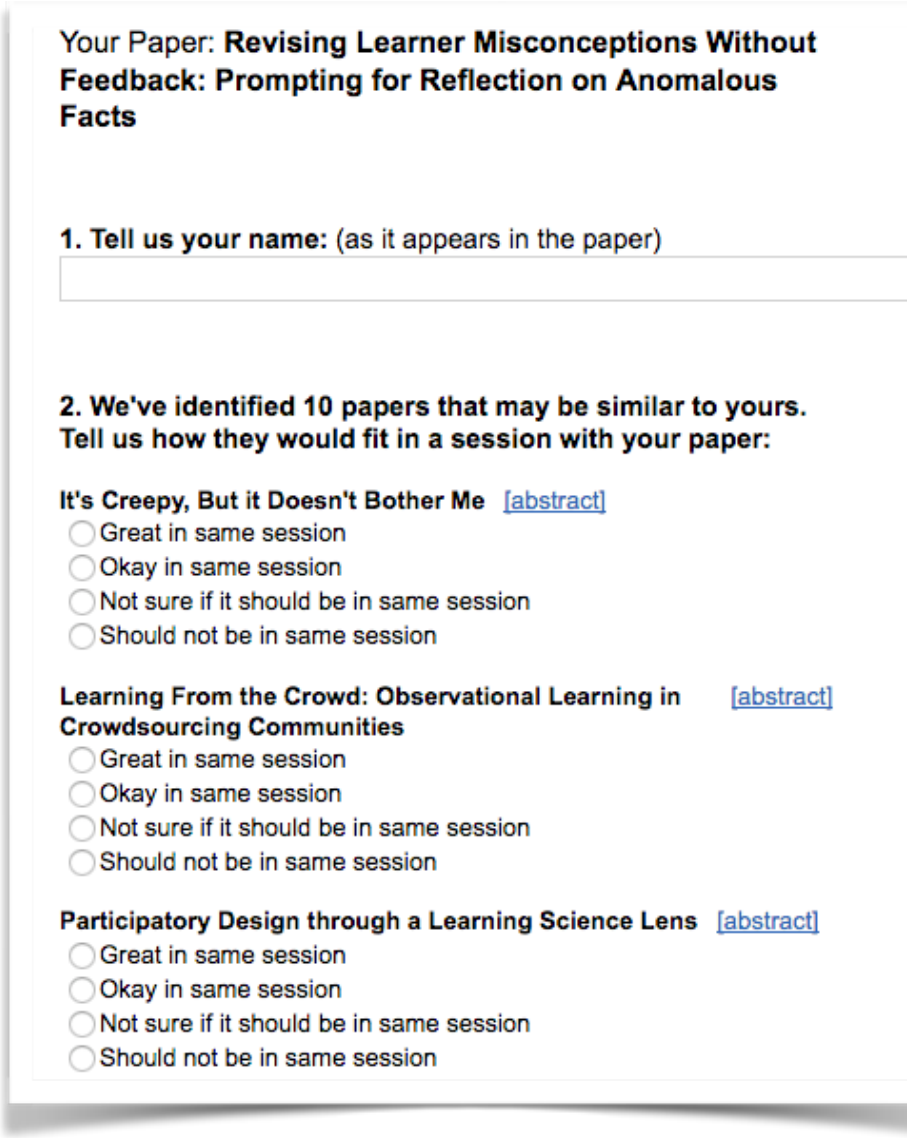
PROGRAM COMMITTEE

~200 PEOPLE

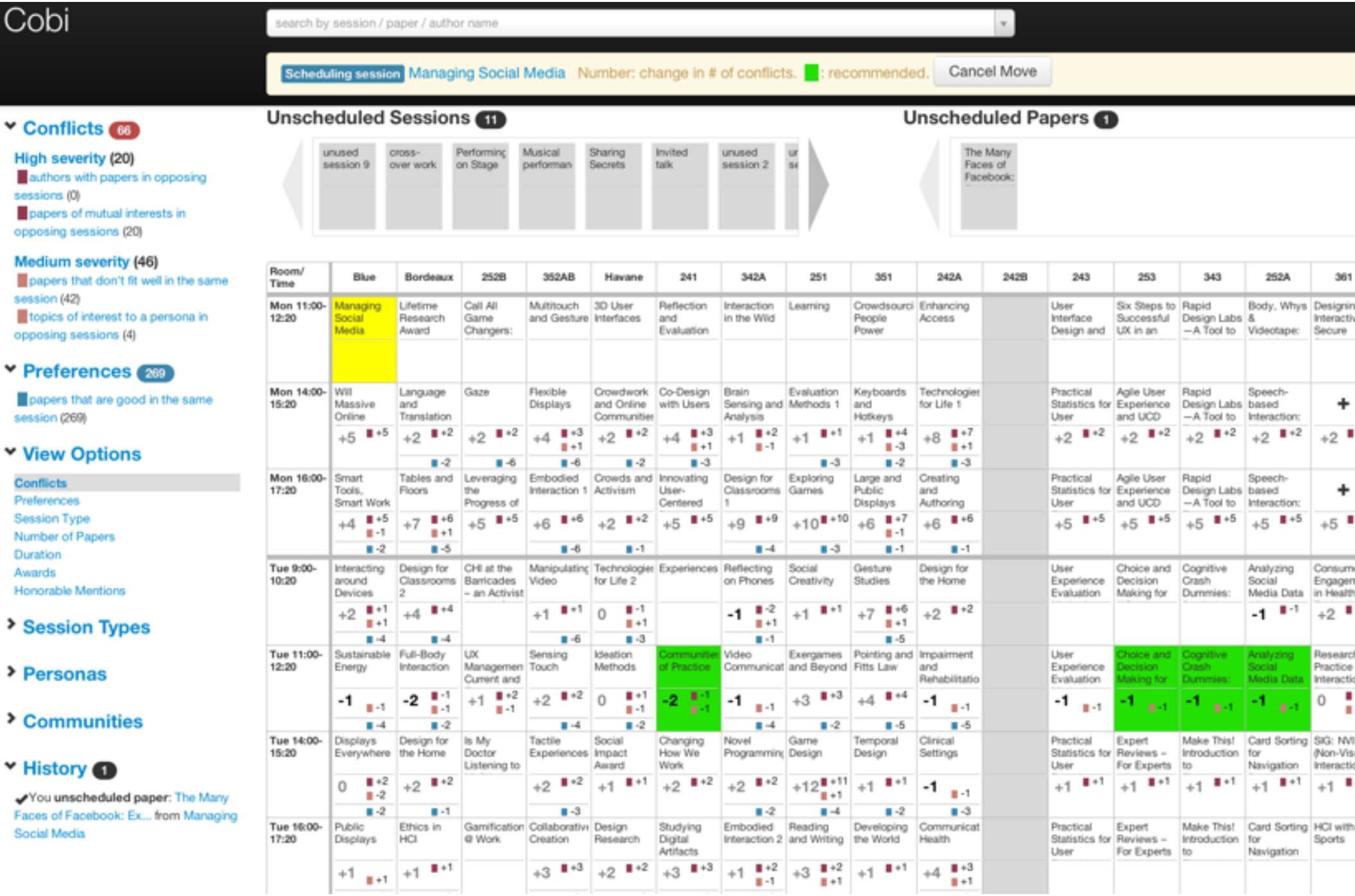


AUTHORS

~1000 PEOPLE

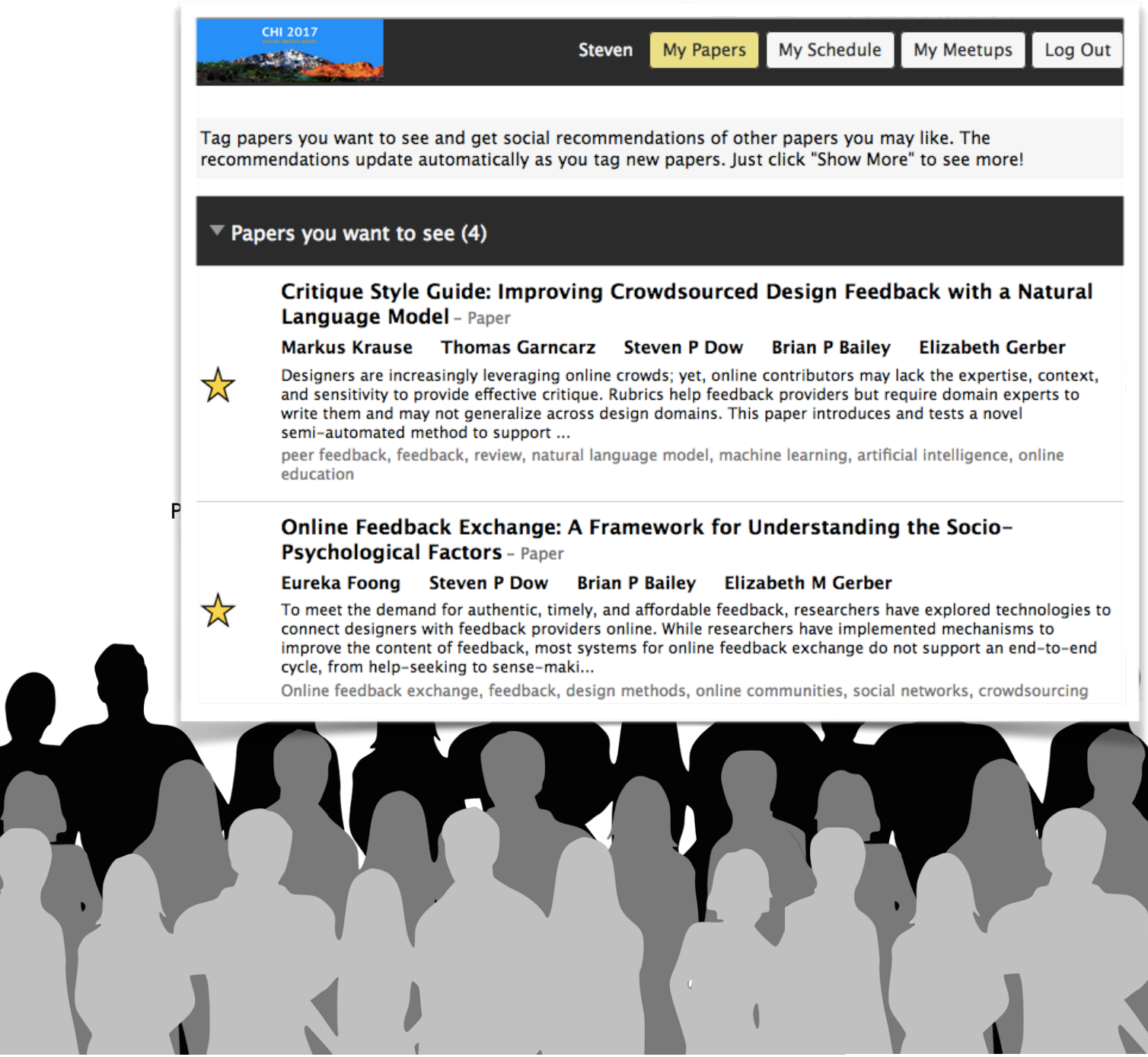


Community Clustering: Leveraging an Academic Crowd To Form Coherent Conference Sessions, Paul André, Haoqi Zhang, Juho Kim, Lydia Chilton, Steven P. Dow and Rob Miller. AAAI Conference on Human Computation and Crowdsourcing, 2013. (Notable Paper Award)



Cobi: A Community-Informed Conference Scheduling Tool, Juho Kim, Haoqi Zhang, Paul André, Lydia B. Chilton, Wendy Mackay, Michel Beaudouin-Lafon, Robert C. Miller, and Steven P. Dow. In Conference on User Interface Software and Technology, 2013.

projectCOBI.com



ATTENDEES

~3500 PEOPLE

projectCOBI.com

pre 2014

2014 -

Discovering constraints at scale

Deployments:

Conference on Computer-Human Interaction (CHI) 2013-2016
Conference on Computer-Supported Cooperative Work (CSCW) 2014-2015

Research papers:

Cobi: A Community-Informed Conference Scheduling Tool, Juho Kim, Haoqi Zhang, Paul André, Lydia B. Chilton, Wendy Mackay, Michel Beaudouin-Lafon, Robert C. Miller, and Steven P. Dow. In Conference on User Interface Software and Technology, 2013.

Community Clustering: Leveraging an Academic Crowd To Form Coherent Conference Sessions, Paul André, Haoqi Zhang, Juho Kim, Lydia Chilton, Steven P. Dow and Rob Miller. AAAI Conference on Human Computation and Crowdsourcing, 2013. **(Notable Paper Award)**

Frenzy: Collaborative Data Organization for Creating Conference Sessions, Lydia Chilton, Juho Kim, Paul André, Felicia Cordeiro, James A. Landay, Daniel S. Weld, Steven P. Dow, Robert C. Miller, and Haoqi Zhang. CHI, 2014. **(Honorable Mention Award)**

Collaborators:







Supporting Collective Innovation

How can we harness collective intelligence, effort, and creativity to innovate on complex problems?

Wicked problems (Rittel and Webber 1973)

CI

Wicked problems (Rittel and Webber 1973)

C1

C2

Wicked problems (Rittel and Webber 1973)

C1

C3

C2

Wicked problems (Rittel and Webber 1973)

C1

C3

C4

C2

Wicked problems (Rittel and Webber 1973)

C5

C1

C3

C4

C2

Wicked problems (Rittel and Webber 1973)

C5

C1

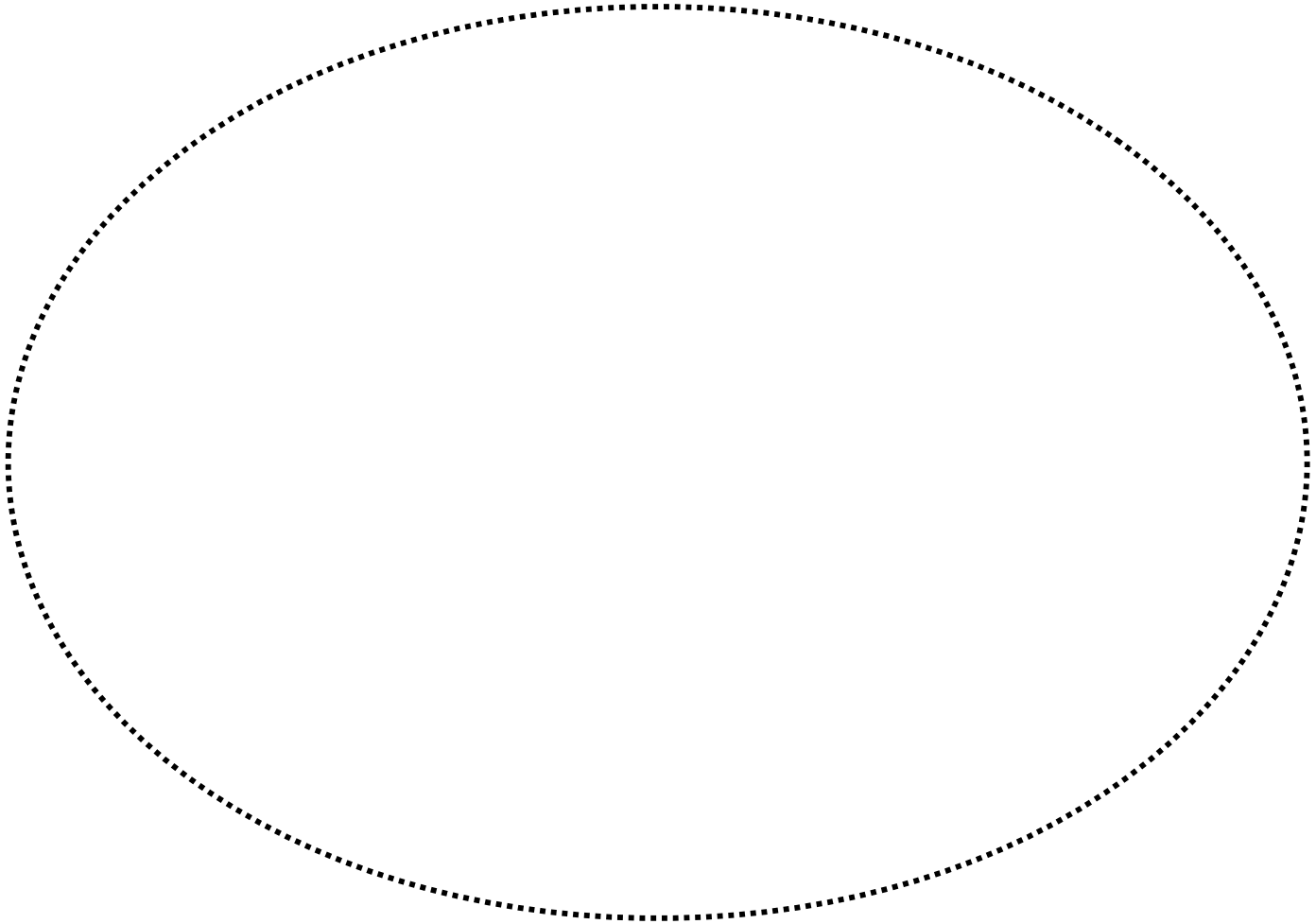
C3

C4

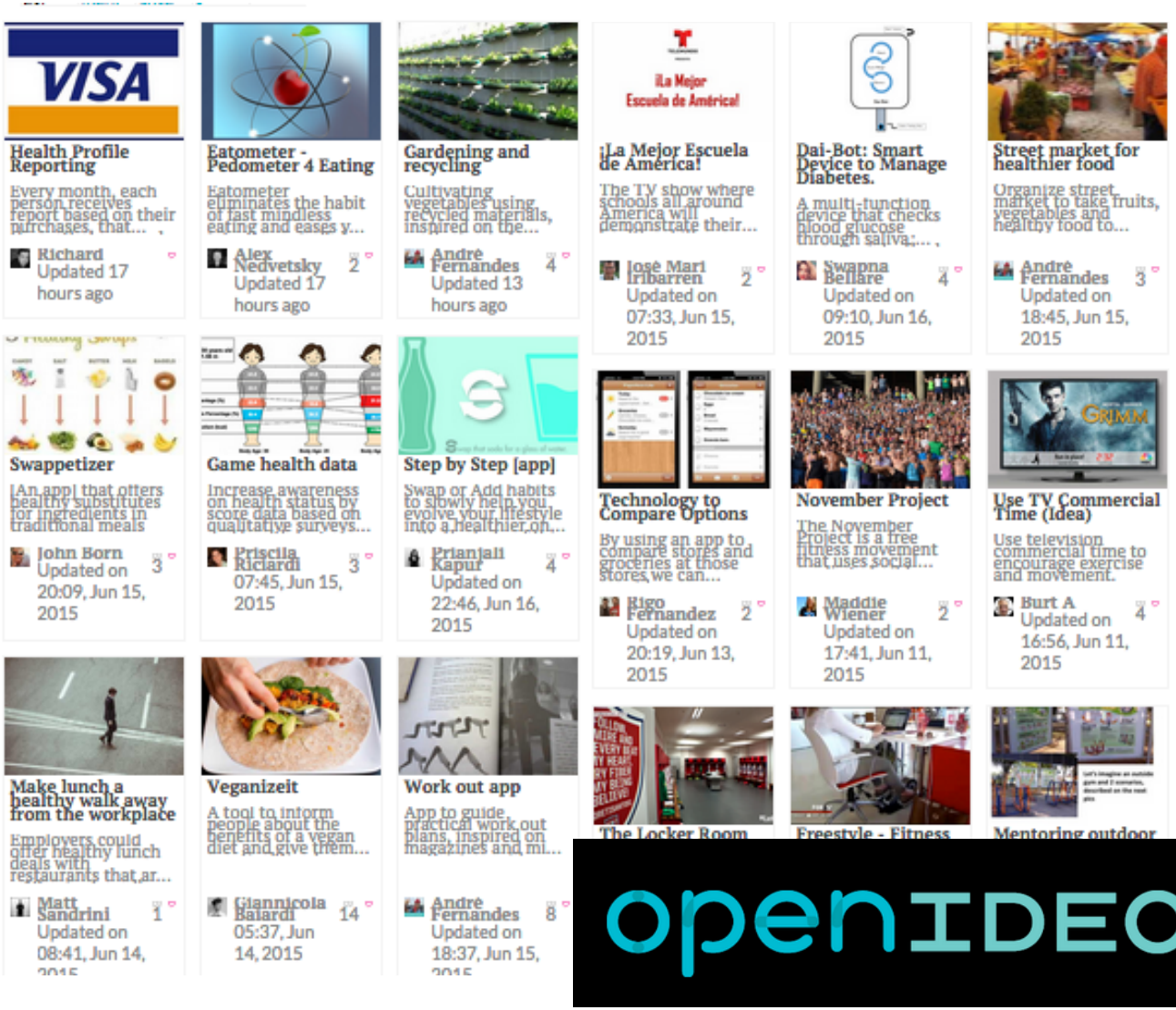
C2


FEAR

Independent teams only gain insight on a portion of the “design space”



Harvesting design inspiration from examples



openIDEO

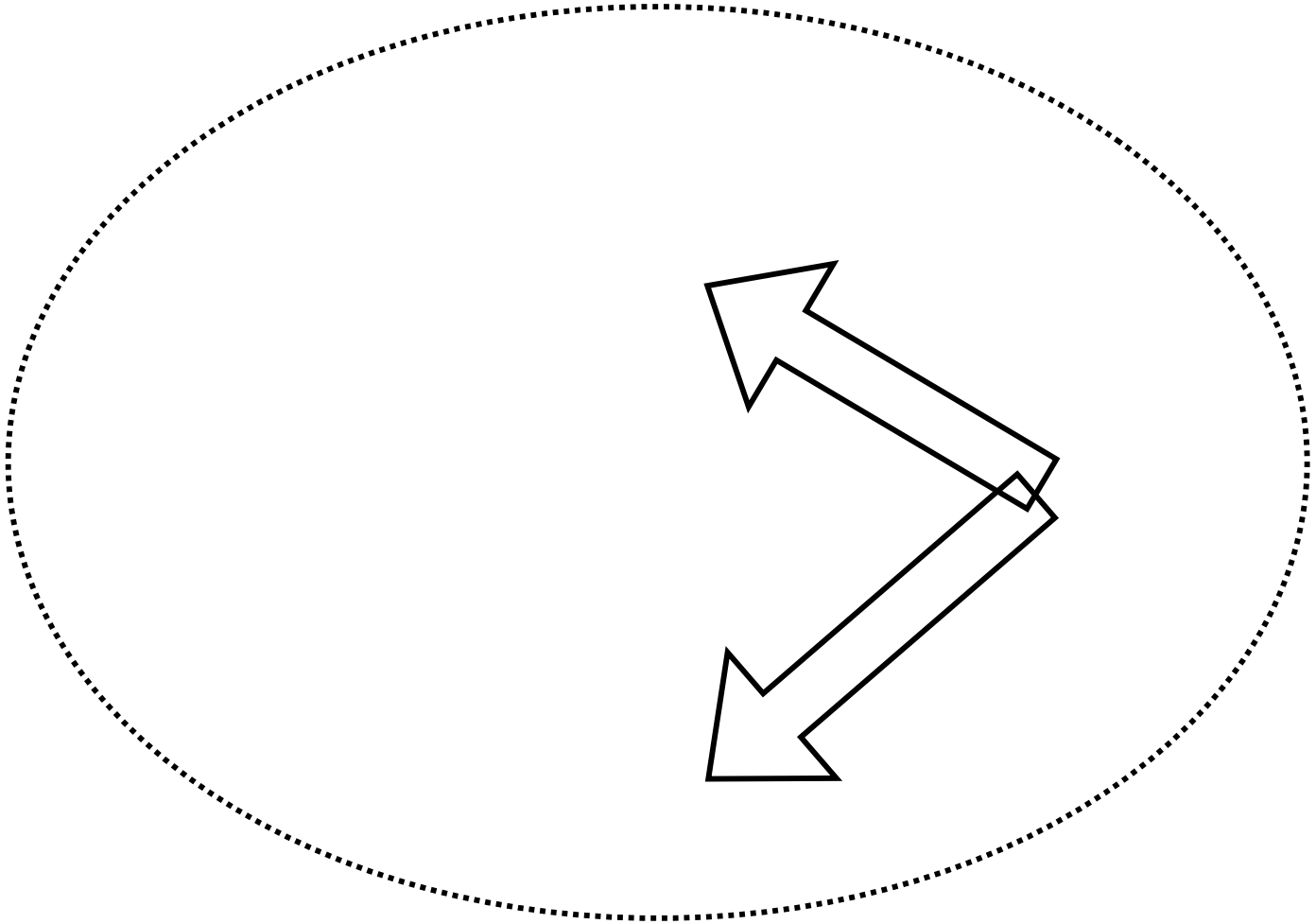
CupClub - Join the Reusable Revolution

By: **CupClub**

Location: **UK**

CupClub is the world's first returnable cup ecosystem which replaces the 100 billion single-use cups and lids used globally every year. CupClub provides a service for drinks, allowing consumers to take away hot and cold beverages from any participating cafe, returning them when finished to the nearest CupClub drop point. Think bike sharing, but for cups.

How can we inspire people to explore the design space more productively?



What should we name our company?

Inspire Me!

Let's make it playful/fun!

Enter ideas related to this inspiration here

Submit Idea

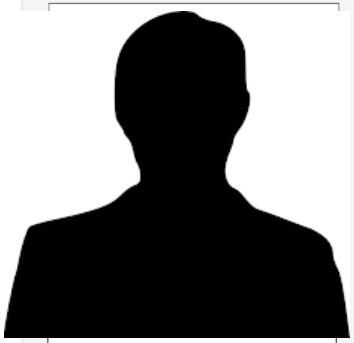
3 Ideas for this Inspiration!

DataLegos

DataPlayground

dataplay

Names that evoke movement (think of fluids, energy, etc.)



Dynamic Data

What should we name our company?

Inspire Me!

Names that evoke movement (think of fluids, energy, etc.)

Enter ideas related to this inspiration here

Submit Idea

6 Ideas for this Inspiration!

DataNitro!

Infoflux

Dynamic Data

Names that evoke movement (think of fluids, energy, etc.)

Enter ideas related to this inspiration here

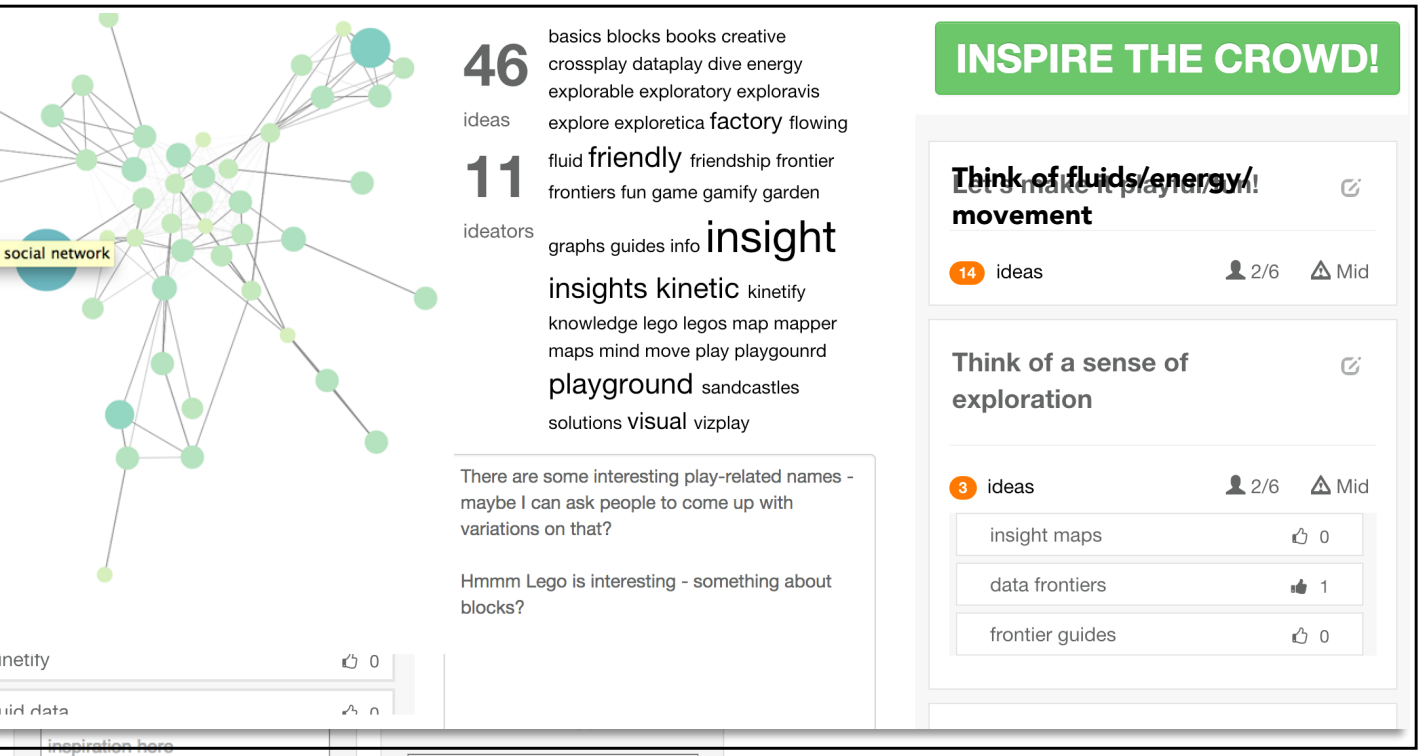
Submit Idea

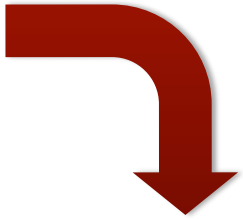
6 Ideas for this Inspiration!

DataNitro!

Infoflux

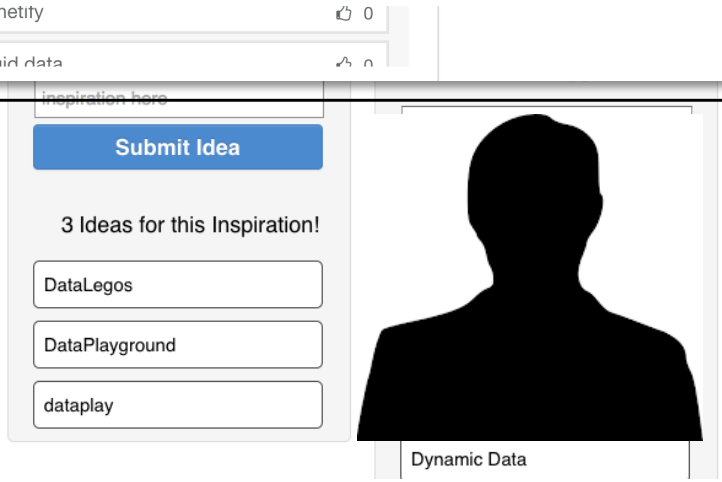
Dynamic Data

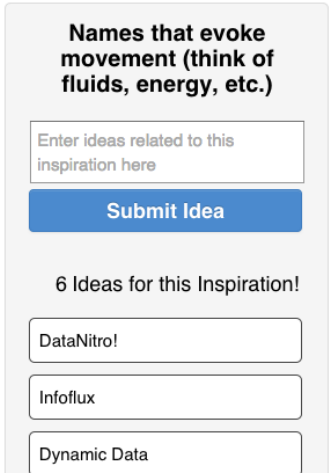


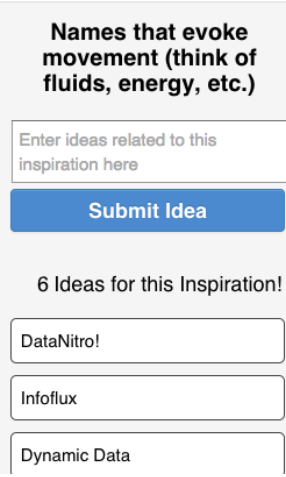


What should we name our company?

Inspire Me!





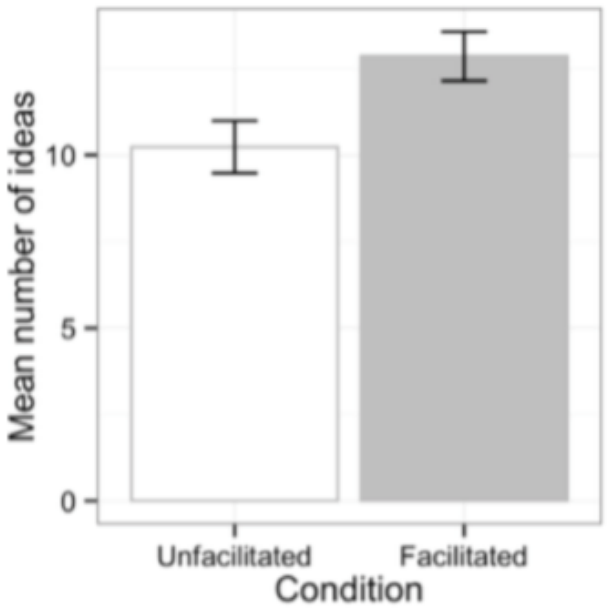


Steven Dow
Advancing Collective Innovation

UC San Diego

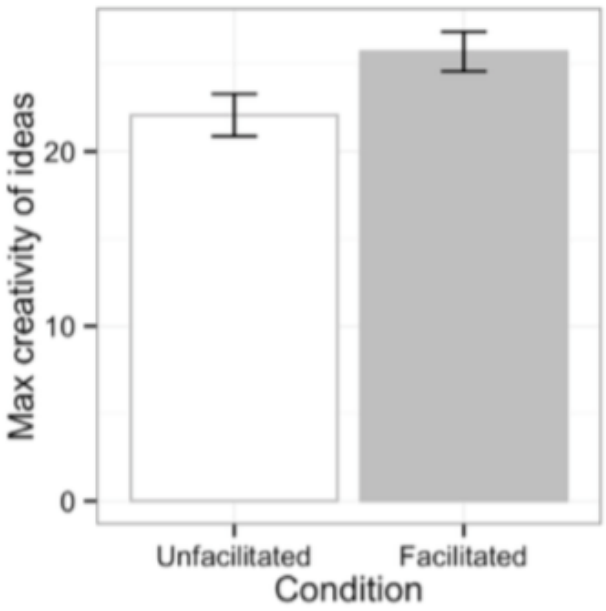
Real-time facilitation improves crowd ideation

more ideas



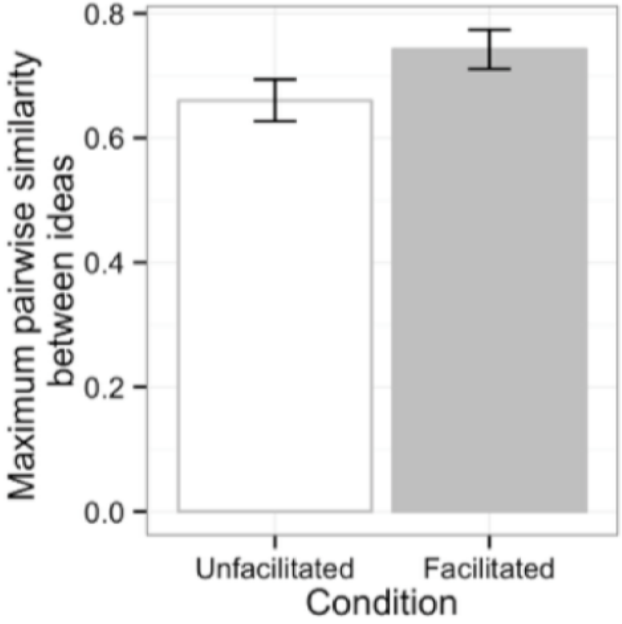
$F(1,83) = 6.4$, $p = .01$

greater max creativity



$F(1,83) = 4.8$, $p = .03$

deeper search



$F(1,83) = 3.2$, $p = .08$

Improving Crowd Innovation with Expert Facilitation, Joel Chan, Steven Dang, and Steven P. Dow. In ACM Conference on Computer-Supported Cooperative Work and Social Computing, 2016.

IdeaGens: A Social Ideation System for Guided Crowd Brainstorming, Joel Chan, Steven Dang, Peter Kremer, Lucy Guo, and Steven P. Dow. In extended abstracts of AAAI Conference on Human Computation and Crowdsourcing, 2014.

Experts derive semantic models that inspire

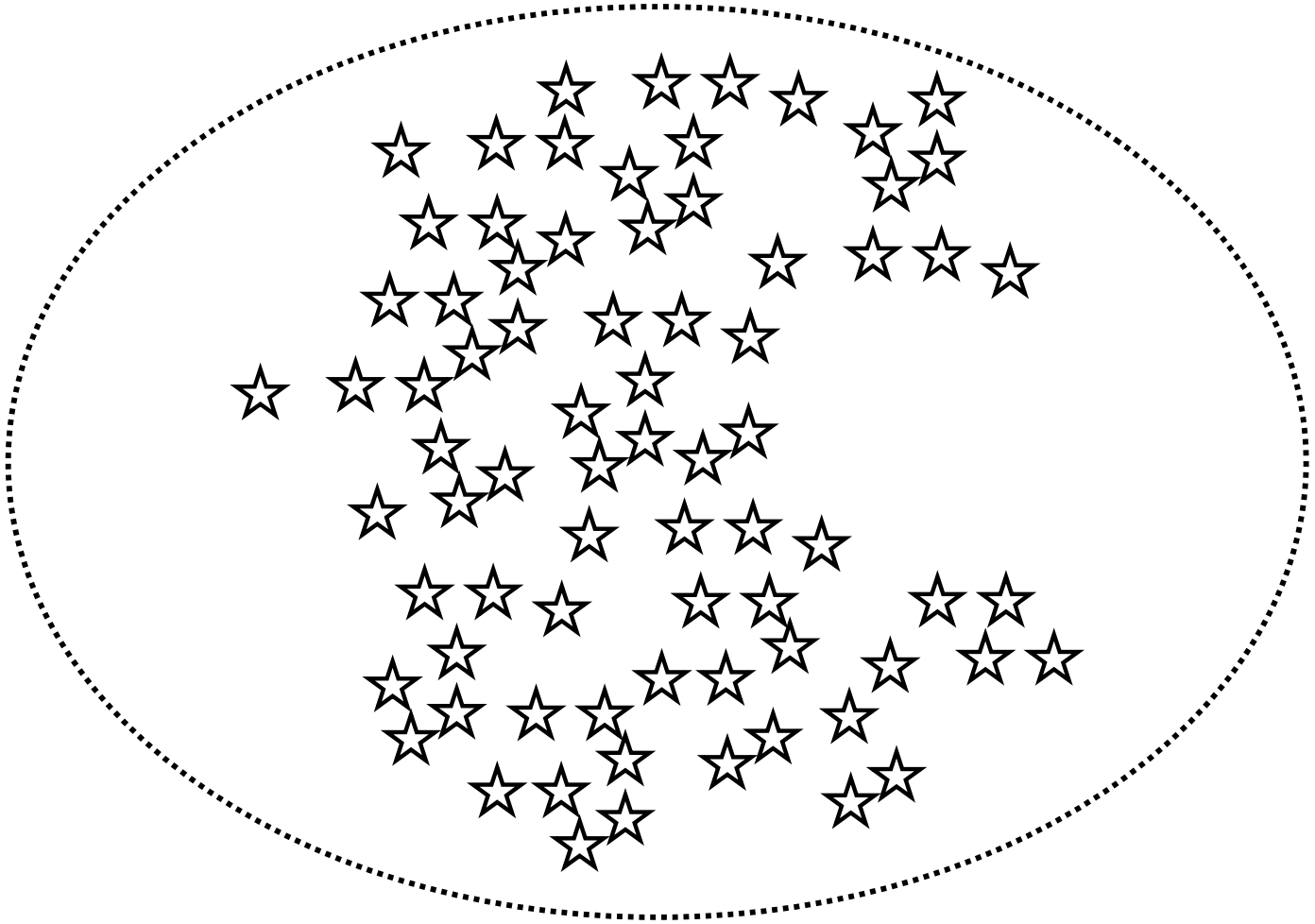
Strategy	Description	Sample Inspiration with Strategy	Yield	Max creativity
Examples	Directly provide an idea	*"Ask them to put their contact info in your phone"*	+0.2	+1.8
Simulations	Invite ideators to generate ideas from a different perspective (e.g., from a different "persona" or specific situation/setting).	*"Imagine if you had a different persona (e.g., a politician collecting signatures). What strategies might be available to you?"*	+0.3	+8.2 **
Inquiries	Provoke open-ended reflection	*"Where might their name be written?"*	+0.2	–2.3

$^{m}p < .10$ $^{*}p < .05$ $^{**}p < .01$,

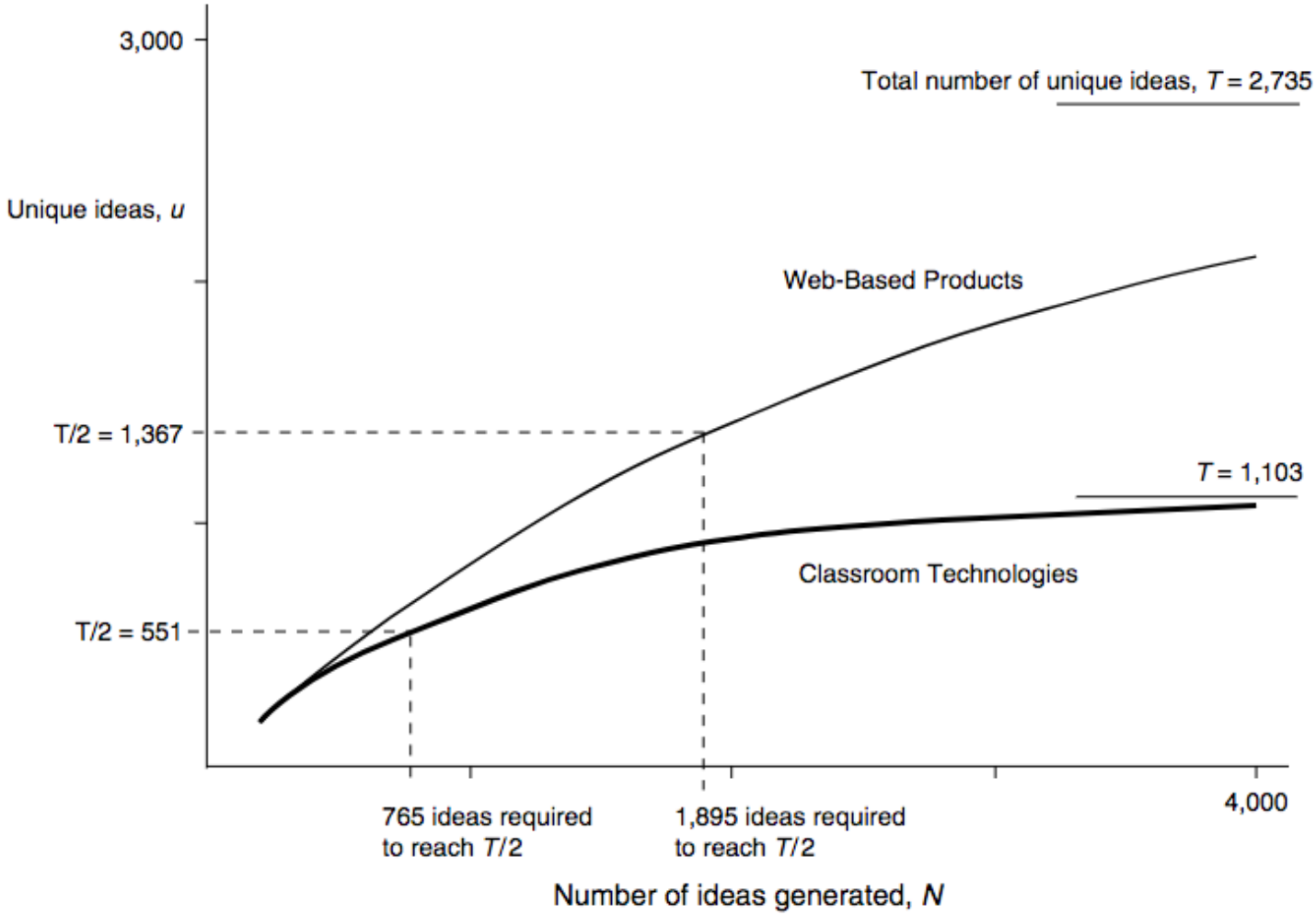
Improving Crowd Innovation with Expert Facilitation, Joel Chan, Steven Dang, and Steven P. Dow. In ACM Conference on Computer-Supported Cooperative Work and Social Computing, 2016.

IdeaGens: A Social Ideation System for Guided Crowd Brainstorming, Joel Chan, Steven Dang, Peter Kremer, Lucy Guo, and Steven P. Dow. In extended abstracts of AAAI Conference on Human Computation and Crowdsourcing, 2014.

(How) can we gain better coverage of very large spaces of ideas?

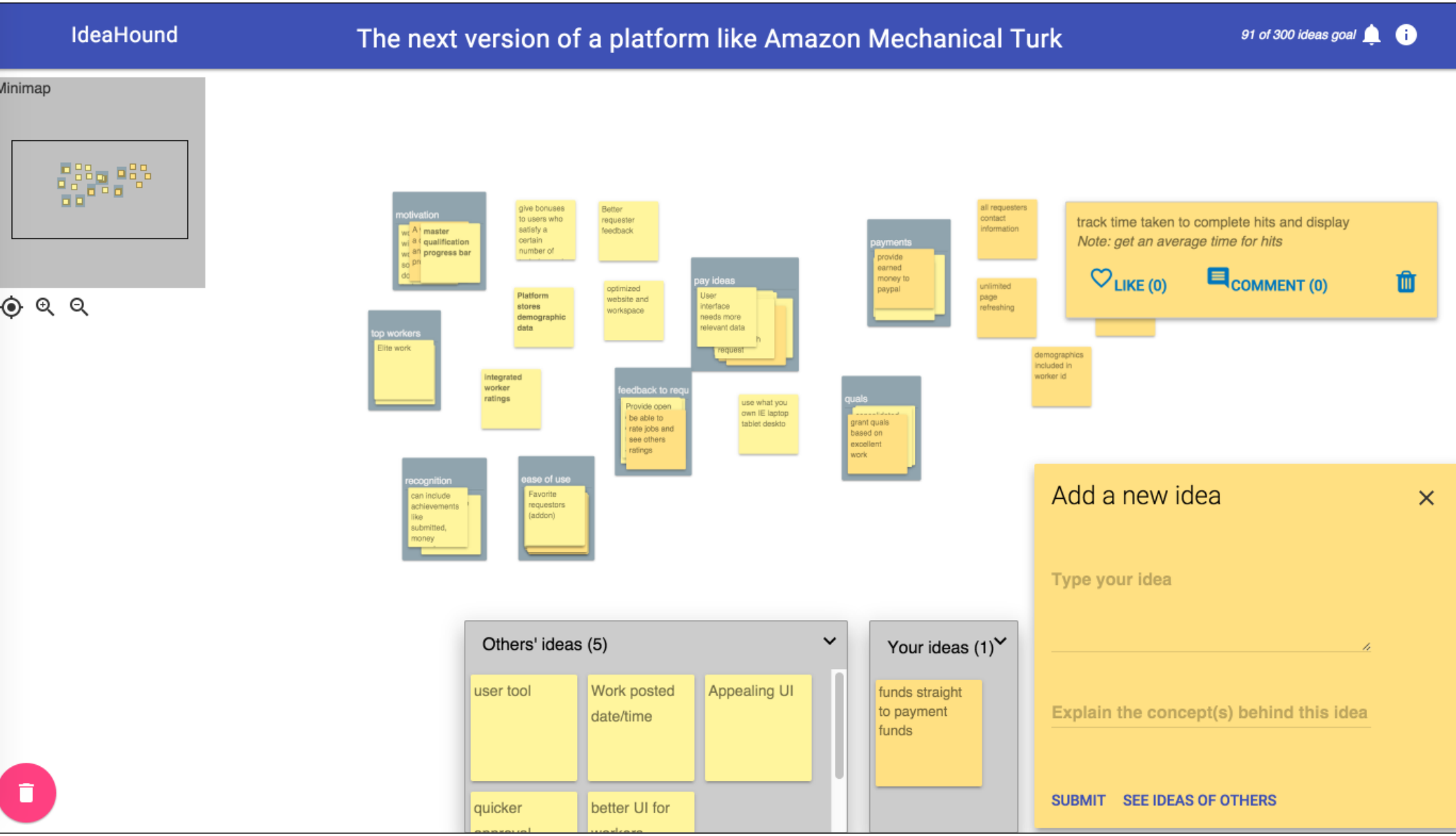


Effort required to explore an opportunity space



Kornish and Ulrich, "Opportunity Spaces in Innovation: Empirical Analysis of Large Samples of Ideas," Management Science (2011): 107-128.

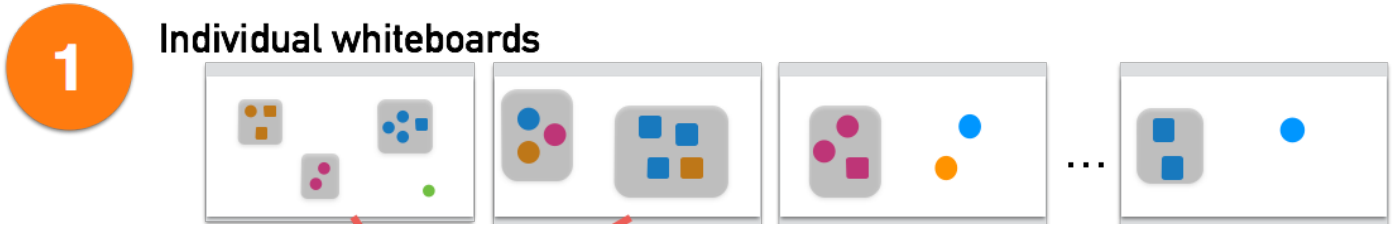

COMMUNICATION
3
WHY?
"IT IS VERY COMMON TO REQUEST CHANGES."
"QUESTIONS JOIN THE PROCESS!"
IT IS NOT "REJECTION"... IT IS "DO NOT APPROVE"
ASK A QUESTION, FORCE A REJECTION.
MAKE IT EASY TO TRACK CHANGES
"I HAVE A QUESTION... HAS IT ALREADY BEEN ASKED?"
NOTES = QUESTIONS + REMINDERS TO THE NEXT PERSON
ELIMINATE PAPER!
ALLOW ME TO EDIT
DIRECT COMMUNICATION TO 1 or MANY?
"I WANT TO SEE EVERYTHING... POINT IT OUT!
MORE DETAIL
LESS
QUICK REVIEW
DETAILED REVIEW
LOOK-UP
STATUS
4
NOTIFICATIONS
WHERE IS THE CAR?
WHO HAS SEEN IT?
INFLUENCE MY TO-DO LIST
"I WANT TO APPROVE CARS STANDING IN LINE AT JEWEL."
WORK-AROUNDS
"WE NEED TO KNOW MORE OR LESS"
I TRACK MY CARS IN AN .XLS
I WANT LET YOU MY QUESTIONS + ANSWERS
I VIEW A DRAFT TO SAVE US GRIEF DURING THE PROCESS



Steven Dow
Advancing Collective Innovation

UC San Diego

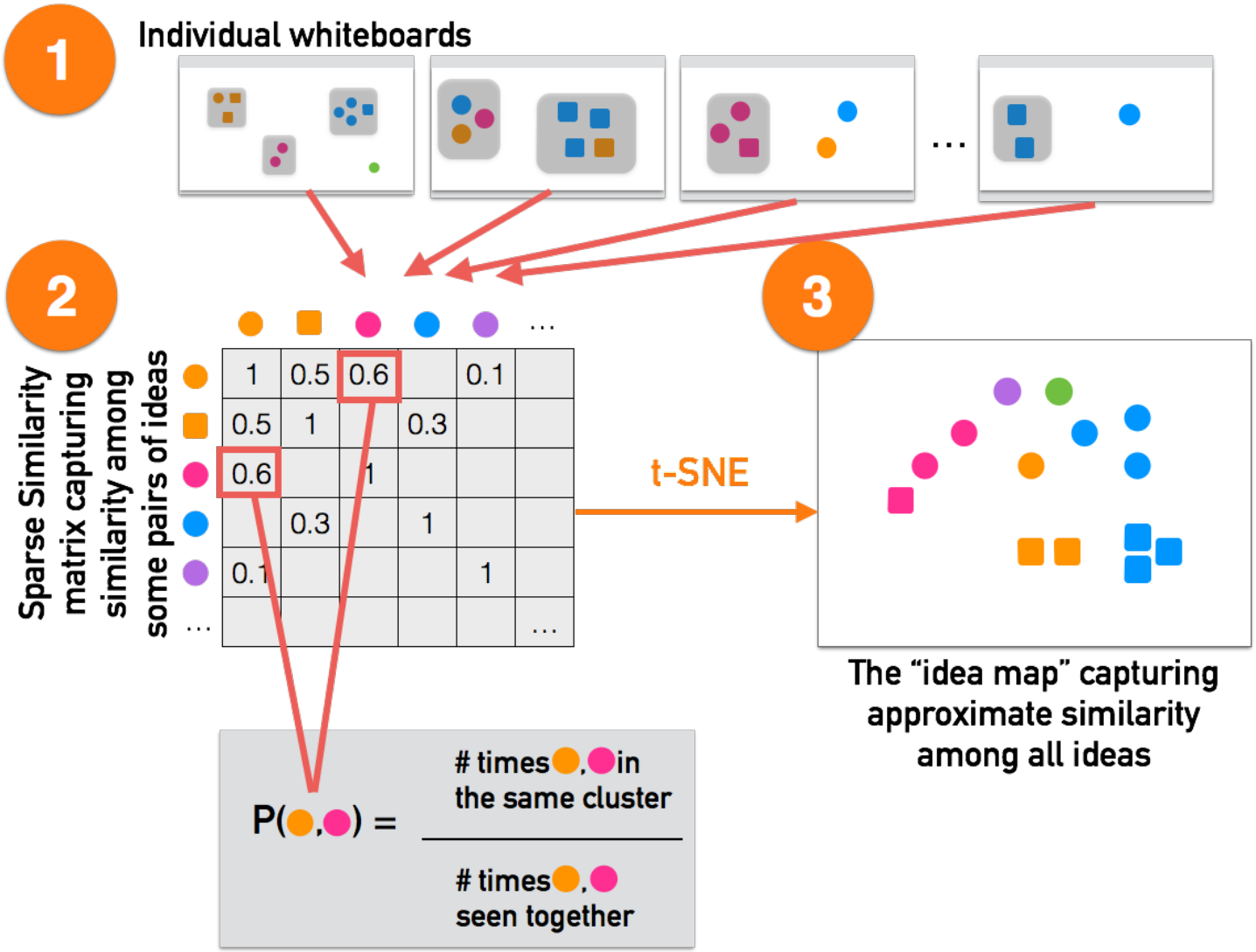
Building an affinity model of concepts



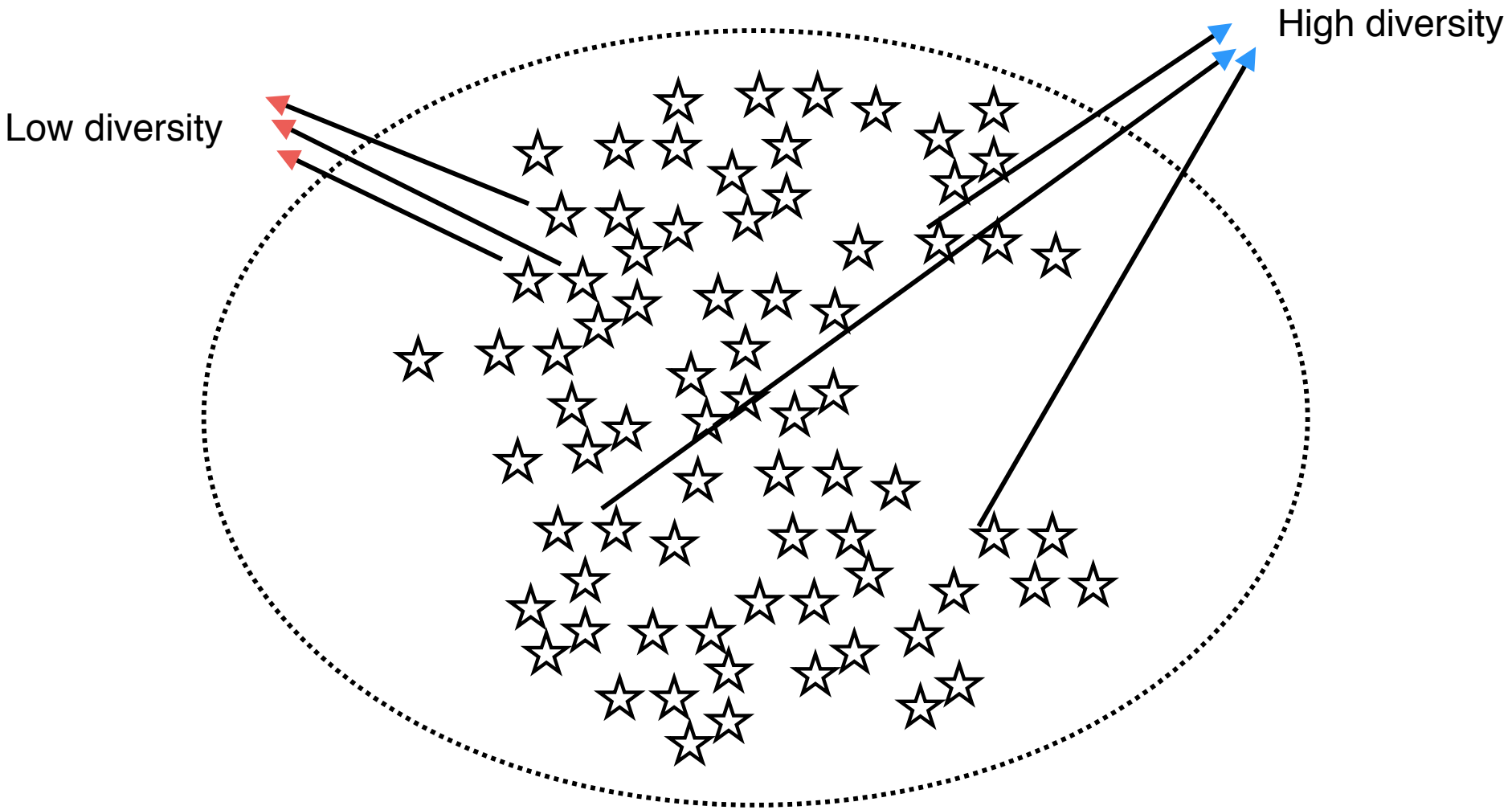
Improving Large-scale Collaborative Ideation with Crowd-powered Real-time Semantic Modeling, Pao Siangliulue, Joel Chan, Steven P. Dow and Krzysztof Z. Gajos,. ACM Conference on User Interface Software and Technology, 2016.

Toward Collaborative Ideation at Scale — Leveraging Ideas from Others to Generate More Creative and Diverse Ideas, Pao Siangliulue, Kenneth C. Arnold, Krzysztof Z. Gajos, and Steven P. Dow. ACM Conference on Computer Supported Cooperative Work and Social Computing, 2015.

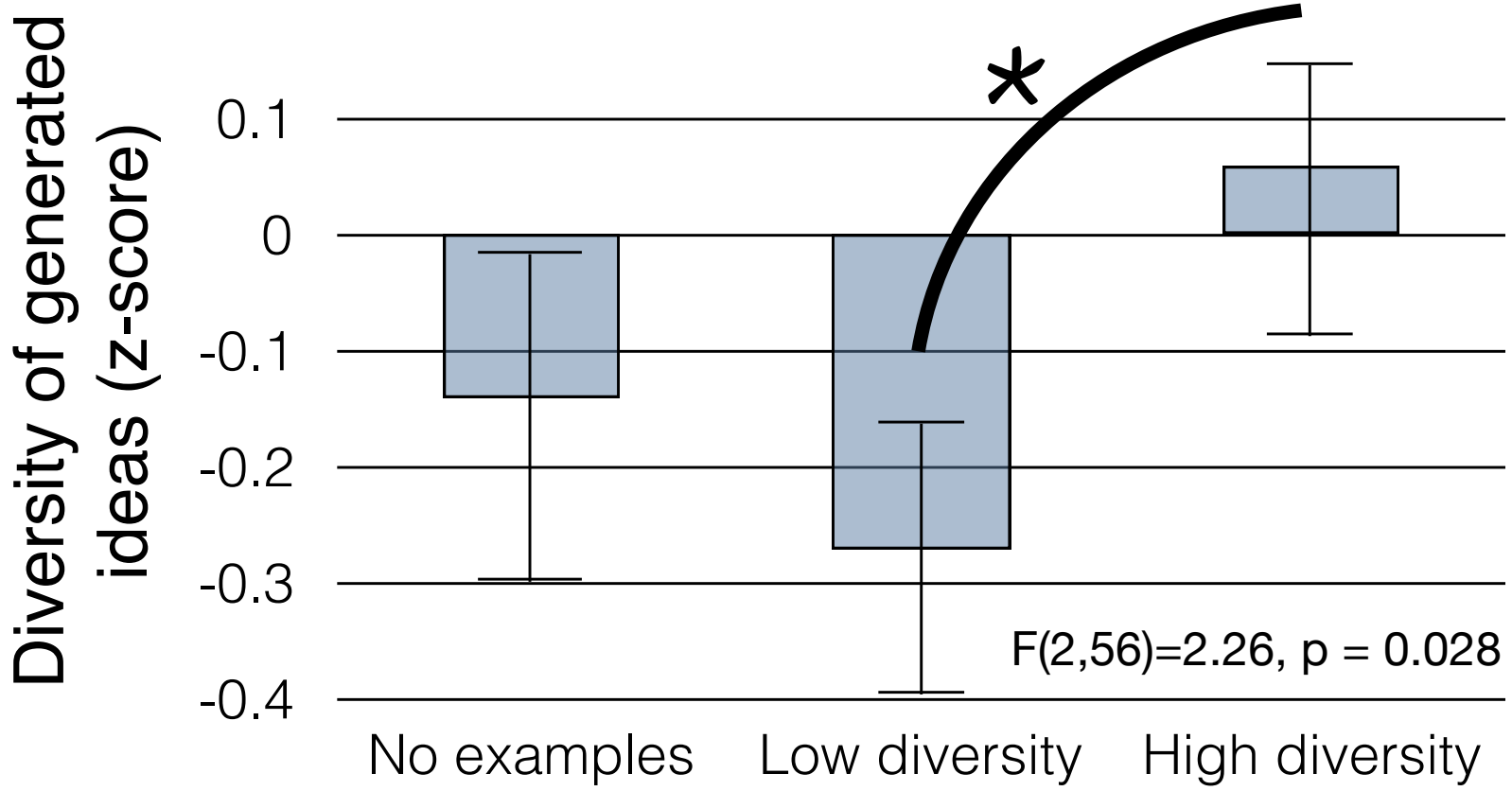
Building an affinity model of concepts



Strategies for sampling concepts from the underlying affinity model



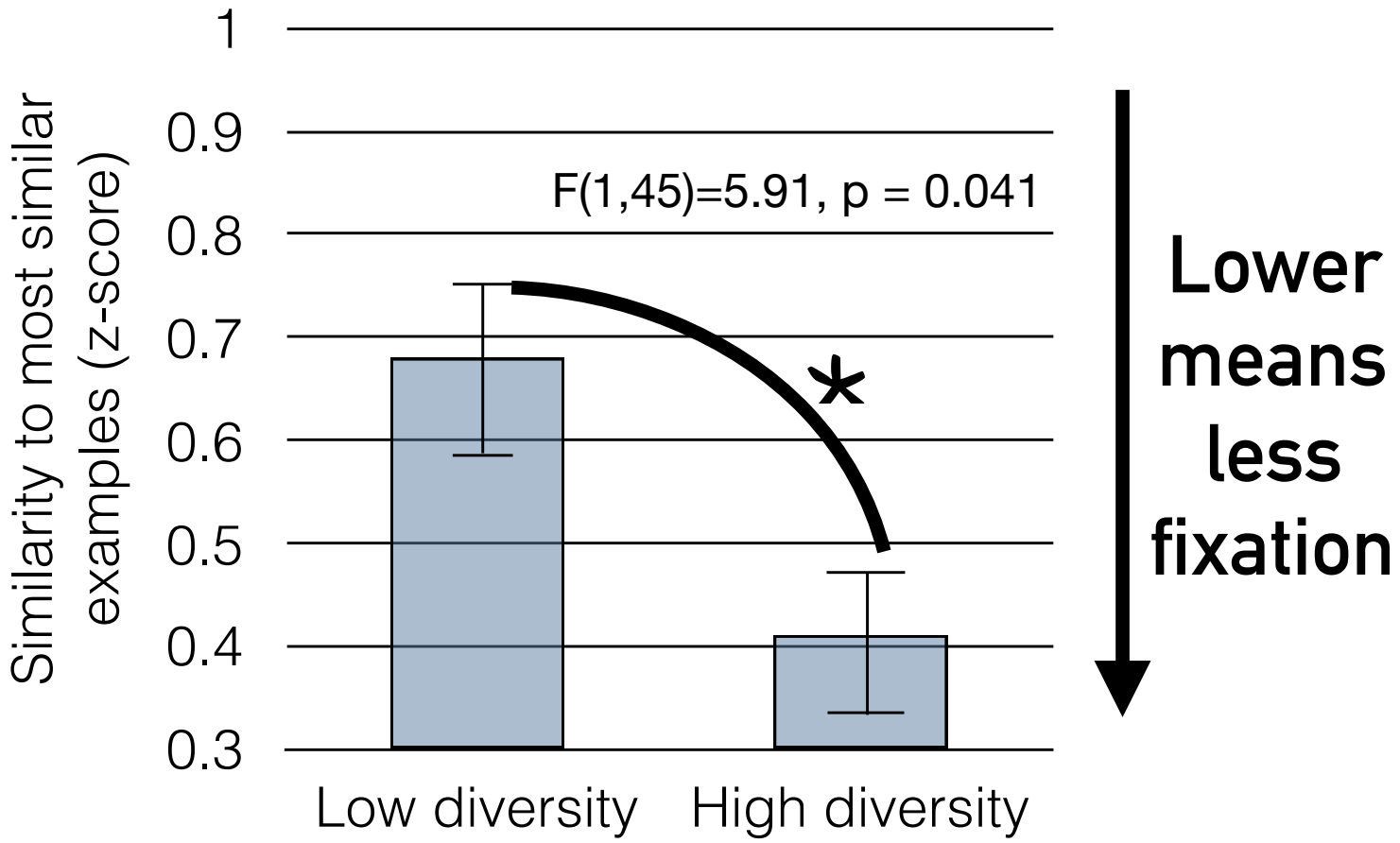
People who saw auto-selected diverse examples generated more diverse ideas



Improving Large-scale Collaborative Ideation with Crowd-powered Real-time Semantic Modeling, Pao Siangliulue, Joel Chan, Steven P. Dow and Krzysztof Z. Gajos,. ACM Conference on User Interface Software and Technology, 2016.

Toward Collaborative Ideation at Scale — Leveraging Ideas from Others to Generate More Creative and Diverse Ideas, Pao Siangliulue, Kenneth C. Arnold, Krzysztof Z. Gajos, and Steven P. Dow. ACM Conference on Computer Supported Cooperative Work and Social Computing, 2015.

People who saw auto-selected diverse examples fixated less



Improving Large-scale Collaborative Ideation with Crowd-powered Real-time Semantic Modeling, Pao Siangliulue, Joel Chan, Steven P. Dow and Krzysztof Z. Gajos,. ACM Conference on User Interface Software and Technology, 2016.

Toward Collaborative Ideation at Scale — Leveraging Ideas from Others to Generate More Creative and Diverse Ideas, Pao Siangliulue, Kenneth C. Arnold, Krzysztof Z. Gajos, and Steven P. Dow. ACM Conference on Computer Supported Cooperative Work and Social Computing, 2015.

Brainstorming with crowds

Research papers:

Improving Crowd Innovation with Expert Facilitation, Joel Chan, Steven Dang, and Steven P. Dow. In ACM Conference on Computer Supported Cooperative Work and Social Computing, 2016.

Do The Best Design Ideas (Really) Come From Conceptually Distant Sources Of Inspiration?, Joel Chan, Steven P. Dow, and Christian D. Schunn. Journal of Design Studies, 2014.

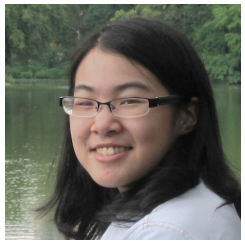
Toward Collaborative Ideation at Scale — Leveraging Ideas from Others to Generate More Creative and Diverse Ideas, Pao Siangliulue, Kenneth C. Arnold, Krzysztof Z. Gajos, and Steven P. Dow. ACM Conference on Computer Supported Cooperative Work and Social Computing, 2015. (Nominated for Best Contribution to Creative Communication)

Conceptual Distance Matters When Building on Others' Ideas in Crowd- Collaborative Innovation Platforms, Joel Chan, Steven P. Dow, and Christian Schunn. In extended abstracts of ACM Conference on Computer Supported Cooperative Work, 2014.

Crowd Synthesis: Extracting Categories and Clusters from Complex Data, Paul André, Niki Kittur, and Steven P. Dow. ACM Conference on Computer Supported Cooperative Work (CSCW'14), 2014.

Collaborators:





CAP-HAITIEN
HISTORIC CENTER
SHADA
EXIT

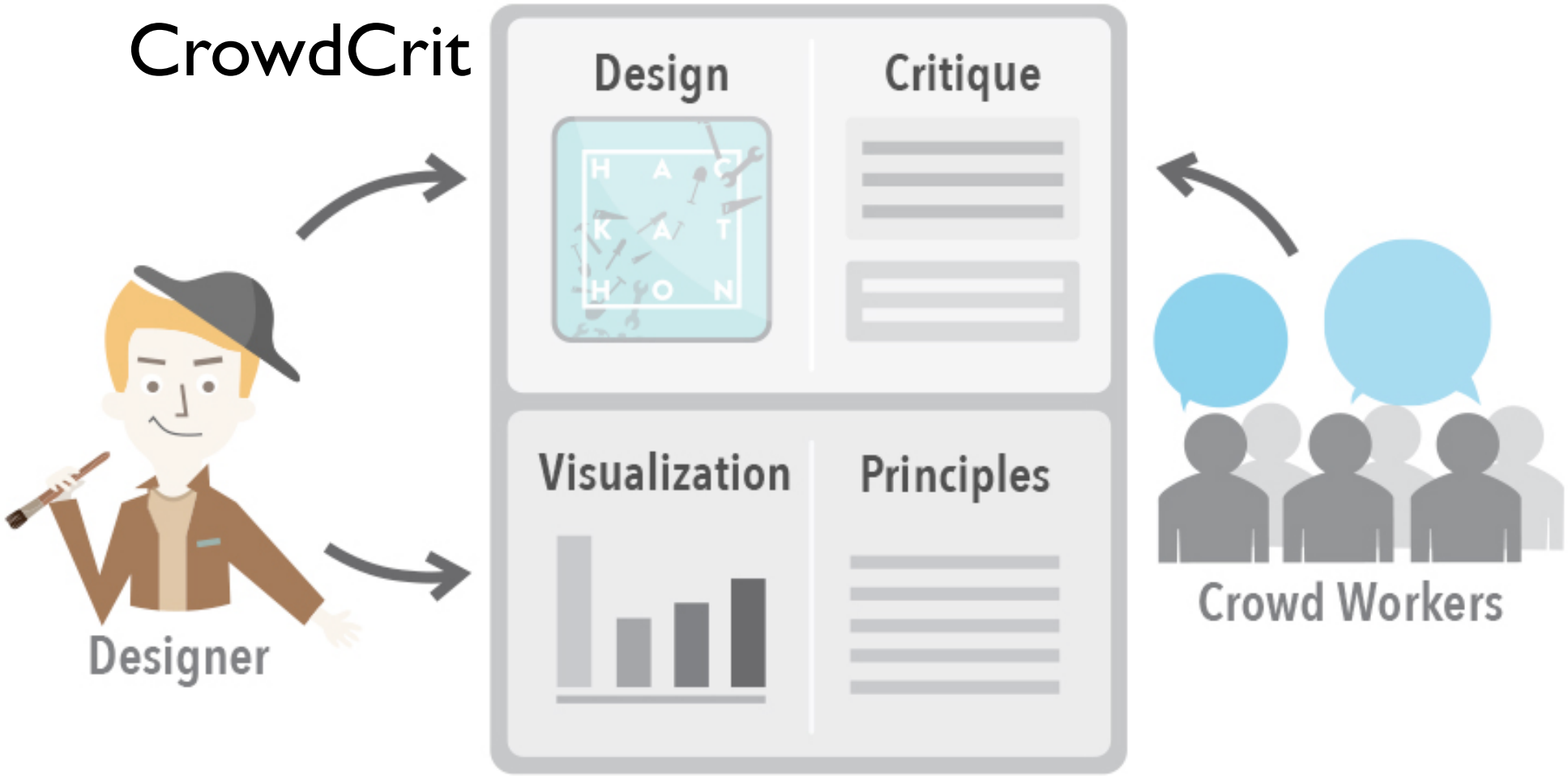
Peer feedback during class: scale but poor diversity

Obtaining feedback from diverse stakeholders

A Pilot Study of Using Crowds in the Classroom, Steven P. Dow, Elizabeth Gerber, and Audris Wong. ACM Conference on Human Factors in Computing Systems, 2013.

Exiting the Design Studio: Leveraging Online Participants for Early-Stage Design Feedback, Xiaojuan Ma, Yu Li, Jodi Forlizzi, and Steven P. Dow. ACM Conference on Computer Supported Cooperative Work and Social Computing, 2015.

Scaffolding feedback exchange



Structuring, Aggregating, and Evaluating Crowdsourced Design Critique, Kurt Luther, Jari-lee Tolentino, Wei Wu, Amy Pavel, Brian P. Bailey, Maneesh Agrawala, Björn Hartmann, and Steven P. Dow. ACM Conference on Computer Supported Cooperative Work and Social Computing, 2015.

CrowdCrit: Principled Rubrics

Allegheny County Music Festival (P1): This is a poster for an upcoming music festival in Allegheny County, Pennsylvania. The goal of the poster is to get people interested in going to the festival.

Add a Critique

The design should match the importance of content to its visual prominence - make the most important information visually dominant. Use clear contrast to distinguish different levels of information.

Layout
Consistency
Balance
Appropriateness
Emphasis
Readability
Simplicity
Other

POSITIVES

- ○ Good visual emphasis
- ○ Good visual flow
- ○ Strong focal point
- ○ Good visual contrast

CRITIQUES

- ○ Elements lack contrast
- ○ Design lacks contrast

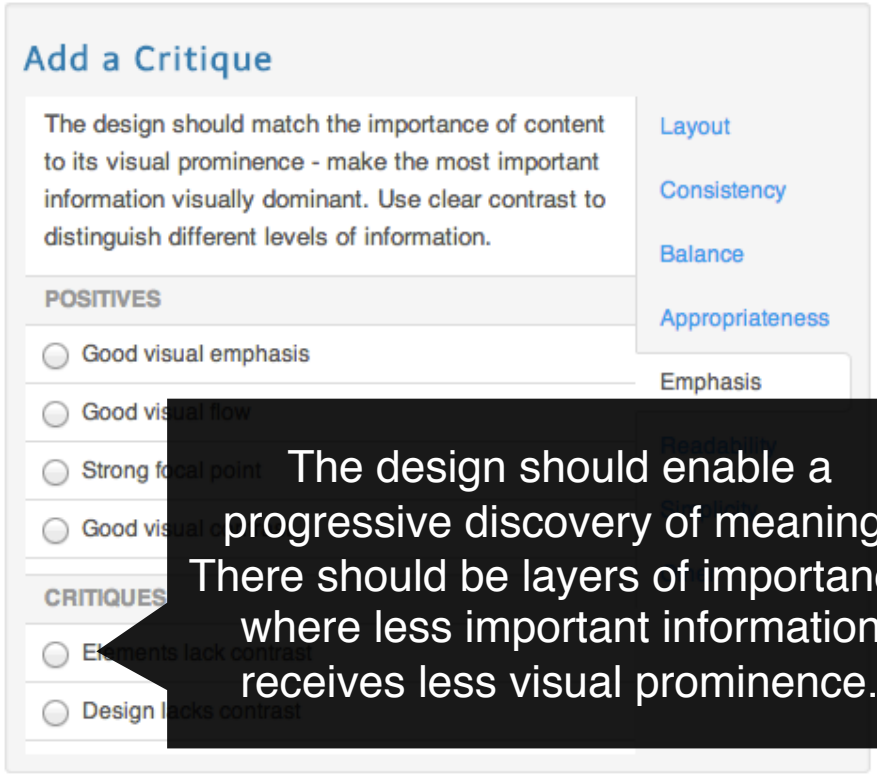
Your Comments

You have not made any comments yet. Your critiques will show up here after you add them.

Structuring, Aggregating, and Evaluating Crowdsourced Design Critique, Kurt Luther, Jari-lee Tolentino, Wei Wu, Amy Pavel, Brian P. Bailey, Maneesh Agrawala, Björn Hartmann, and Steven P. Dow. ACM Conference on Computer Supported Cooperative Work and Social Computing, 2015.

CrowdCrit: Principled Rubrics

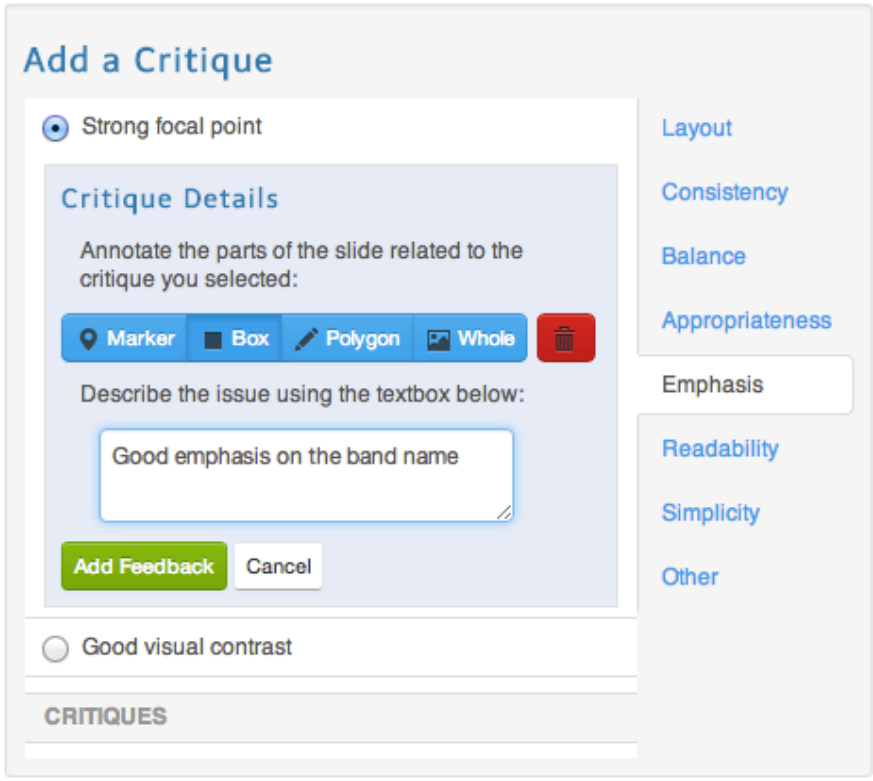
Allegheny County Music Festival (P1): This is a poster for an upcoming music festival in Allegheny County, Pennsylvania. The goal of the poster is to get people interested in going to the festival.

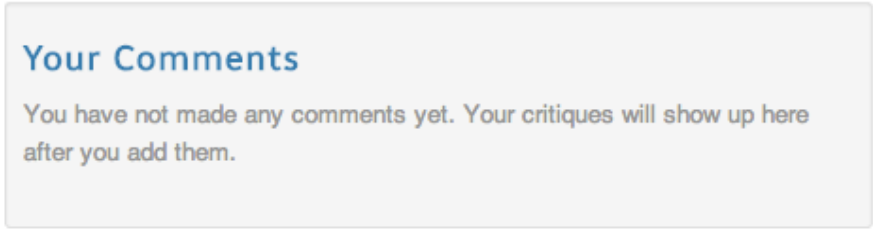


Structuring, Aggregating, and Evaluating Crowdsourced Design Critique, Kurt Luther, Jari-lee Tolentino, Wei Wu, Amy Pavel, Brian P. Bailey, Maneesh Agrawala, Björn Hartmann, and Steven P. Dow. ACM Conference on Computer Supported Cooperative Work and Social Computing, 2015.

CrowdCrit: Annotations

Allegheny County Music Festival (P1): This is a poster for an upcoming music festival in Allegheny County, Pennsylvania. The goal of the poster is to get people interested in going to the festival.





Structuring, Aggregating, and Evaluating Crowdsourced Design Critique, Kurt Luther, Jari-lee Tolentino, Wei Wu, Amy Pavel, Brian P. Bailey, Maneesh Agrawala, Björn Hartmann, and Steven P. Dow. ACM Conference on Computer Supported Cooperative Work and Social Computing, 2015.

CrowdCrit: Visual overview

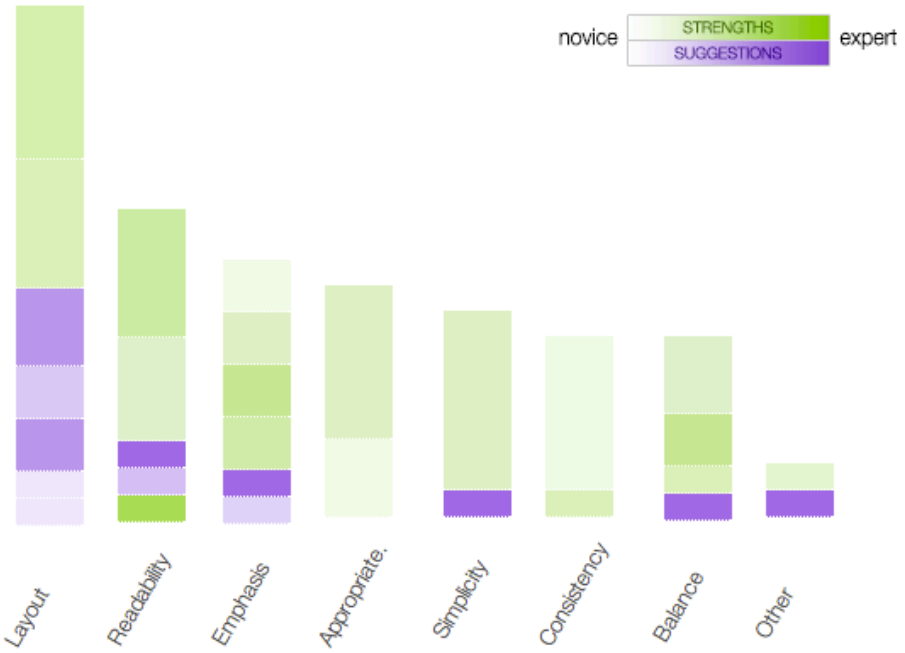
Feedback On Your Design

Overview | Appropriateness | Balance | Consistency | Emphasis | Layout | Readability | Simplicity | Other

TITLE **Allegheny County Music Festival (P1)**

CONTEXT This is a poster for an upcoming music festival in Allegheny County, Pennsylvania. The goal of the poster is to get people interested in going to the festival.

Feedback Distribution (75)



Top Feedback

8%	Simple and clean (Simplicity)	strength
6%	Well organized (Layout)	strength
6%	Consistent design language (Consistency)	strength

Ste
Ad

UC San Diego

CrowdCrit: Detailed feedback

Feedback On Your Design

Overview | Appropriateness | Balance | Consistency | Emphasis | Layout | Readability | Simplicity | Other

TITLE **Allegheny County Music Festival (P1)**

CONTEXT This is a poster for an upcoming music festival in Allegheny County, Pennsylvania. The goal of the poster is to get people interested in going to the festival.

Layout (20)

Collapse/Expand All

Well organized (6)

"Overall its a good poster. It the right style and design for the event its promoting."	competent
(no details)	competent
"In General, the message is clear."	expert
"Good use of space."	novice
(no details)	novice
"Well organized; not a lot of distractions. Straight to the point! Easy to read. Design is great!"	novice

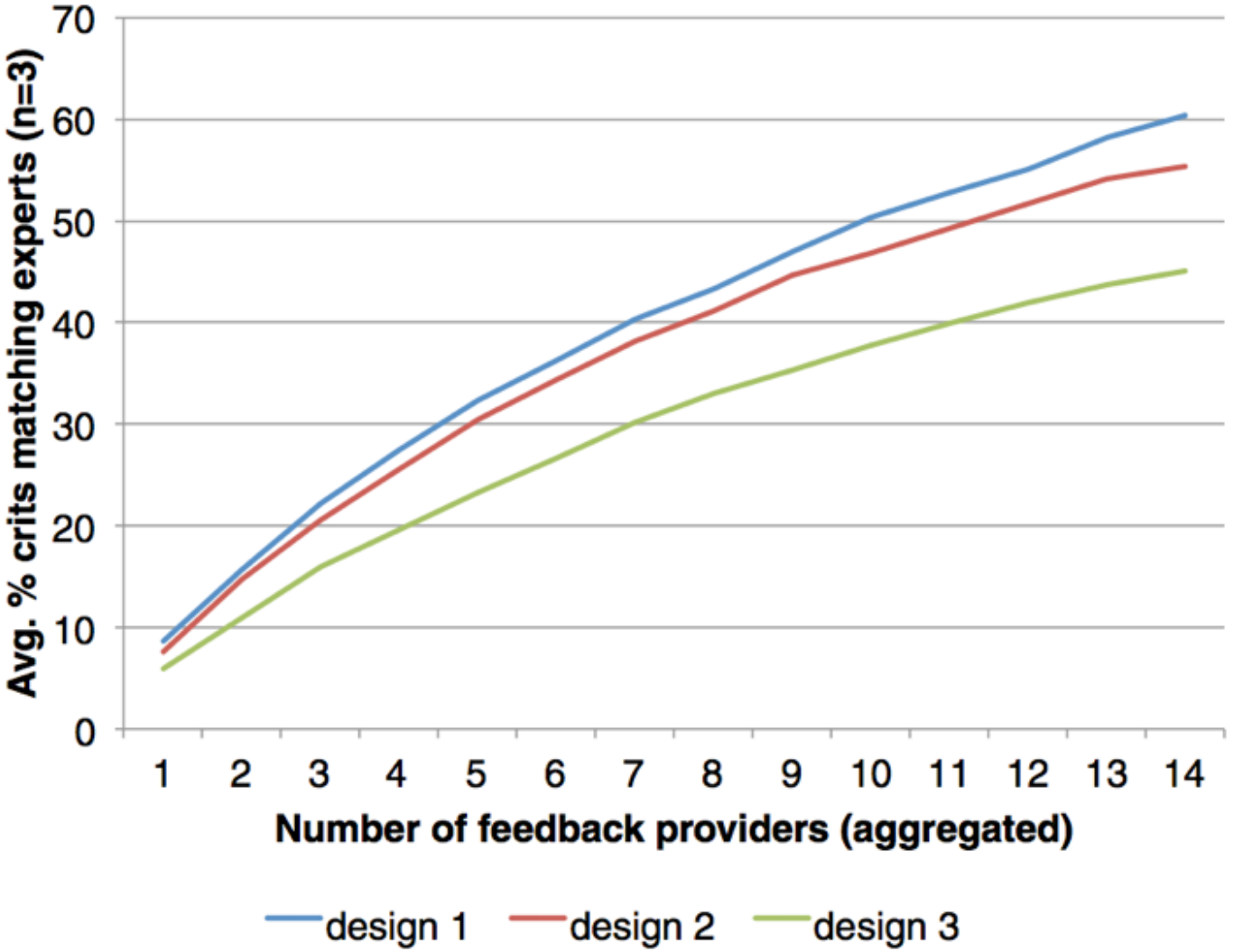
Good alignment (5)

"Text has good margins"	competent
"I really like the use of space here. There is not too much blank space. "	novice
"No issues with alignment. Very nice. "	competent
"Everything is aligned and in great order. It's easy on the eyes and attractive."	novice
"Very readable - great spacing, contrast, font and size."	competent

Poor placement (3)

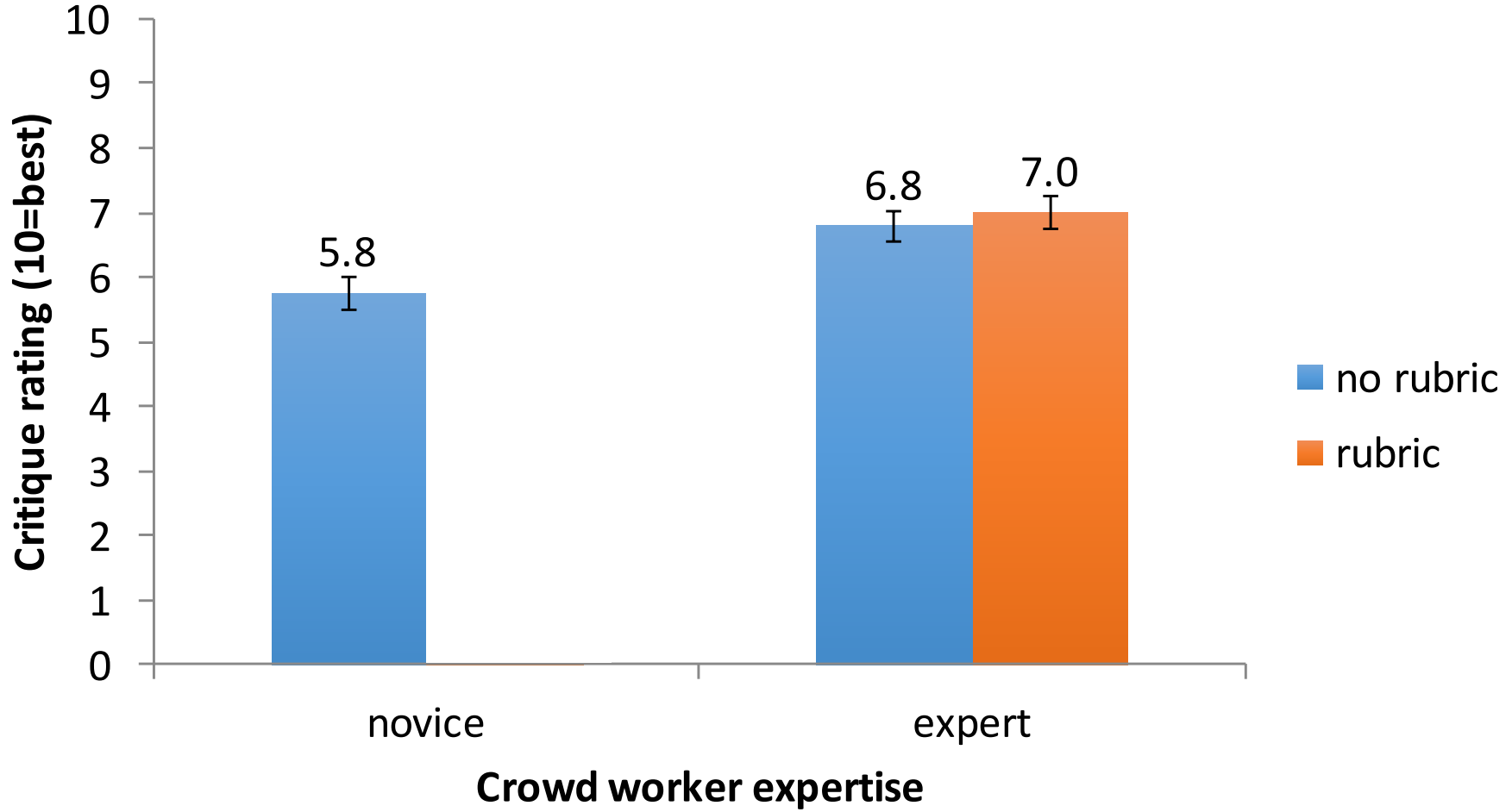
"I think this should be at the top with the event title, so the audience immediately knows the date of the event."	competent

More feedback providers, more issues identified



Structuring, Aggregating, and Evaluating Crowdsourced Design Critique, Kurt Luther, Jari-lee Tolentino, Wei Wu, Amy Pavel, Brian P. Bailey, Maneesh Agrawala, Björn Hartmann, and Steven P. Dow. ACM Conference on Computer Supported Cooperative Work and Social Computing, 2015.

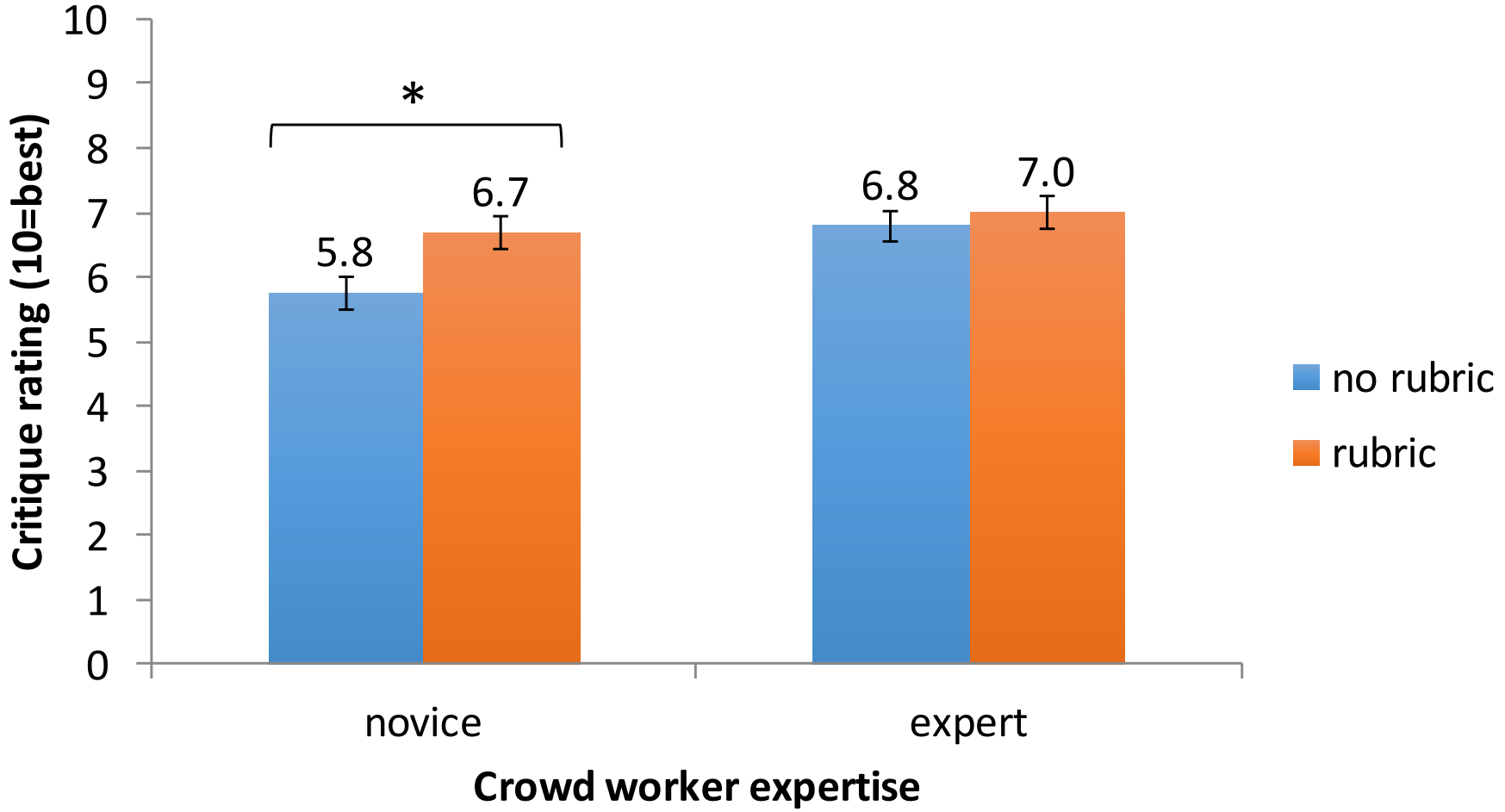
Without rubrics, novices do worse than experts



No rubric novice (M=5.76, SD=1.28) < No rubric expert (M=6.79, SD=0.41), $p < 0.05$
No rubric novice (M=5.76, SD=1.28) < Rubric expert (M=7.00, SD=0.79), $p < 0.05$

Almost an Expert: The Effects of Rubrics and Expertise on Perceived Value of Crowdsourced Design Critiques, Alvin Yuan, Kurt Luther, Sophie Vennix, Markus Krause, Steven P. Dow, and Björn Hartmann. In ACM Computer Supported Cooperative Work and Social Computing (CSCW'16), 2016.

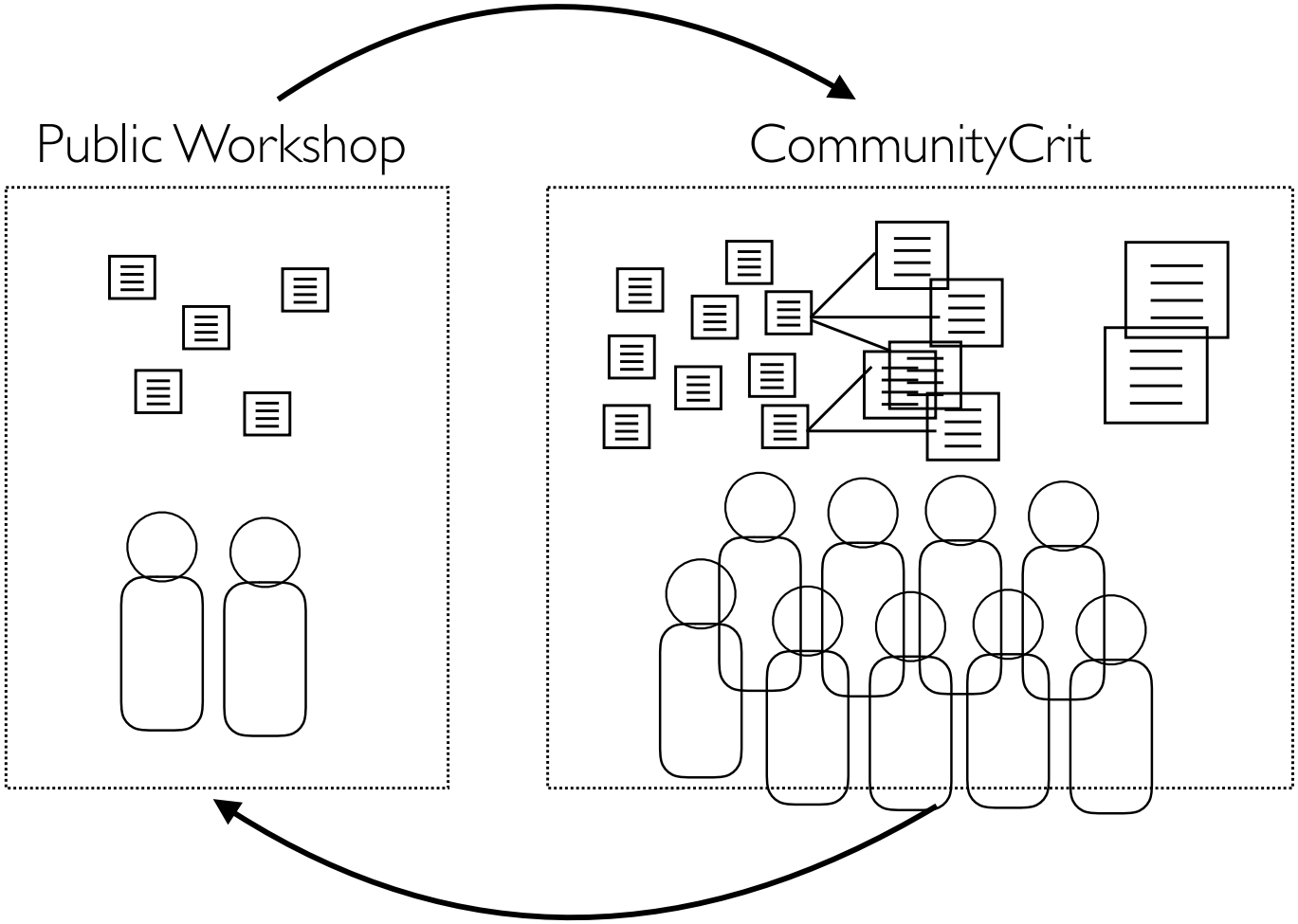
With rubrics, novices critique ratings improve



Rubric novice (M=6.69, SD=0.65) > No rubric novice (M=5.76, SD=1.28), $p < 0.05$

Almost an Expert: The Effects of Rubrics and Expertise on Perceived Value of Crowdsourced Design Critiques, Alvin Yuan, Kurt Luther, Sophie Vennix, Markus Krause, Steven P. Dow, and Björn Hartmann. In ACM Computer Supported Cooperative Work and Social Computing (CSCW'16), 2016.

CommunityCrit supplements public workshops



CommunityCrit

cc.ucsd.edu

CommunityCrit allows the public to participate in the urban design process.

By offering a quick and easy way to voice opinions, CommunityCrit empowers anyone to help shape the future of their community.

Currently, we are collecting feedback on an effort to expand the 14th Street Promenade in East Village. The intersection of 14th Street, National Avenue, and Commercial Street—referred to as "El Nudillo," or "the knuckle"—is envisioned as a pedestrian destination, a place of social gathering, and a celebration of East Village and its surrounding neighborhoods.

What do you think El Nudillo should be? Please click below to contribute your voice!

GET STARTED

How do surrounding community members think about improving this intersection?

Background Info on El Nudillo

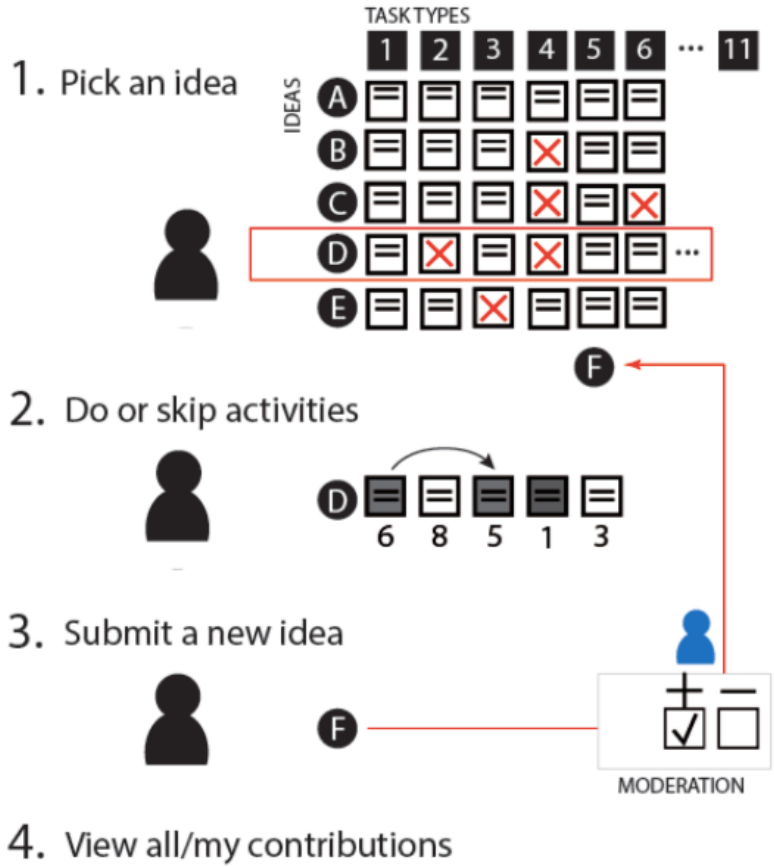
The 14th Street Promenade, which was approved by the city in 2016, will be a pedestrian-friendly "green street" extending from City College in the north to the intersection of 14th Street and National Avenue in the south. It will feature widened sidewalks, outdoor furniture, and art, in order to promote social gathering and a unique neighborhood feel. The overarching goal for the 14th Street Promenade is to help create a more sustainable, walkable downtown.

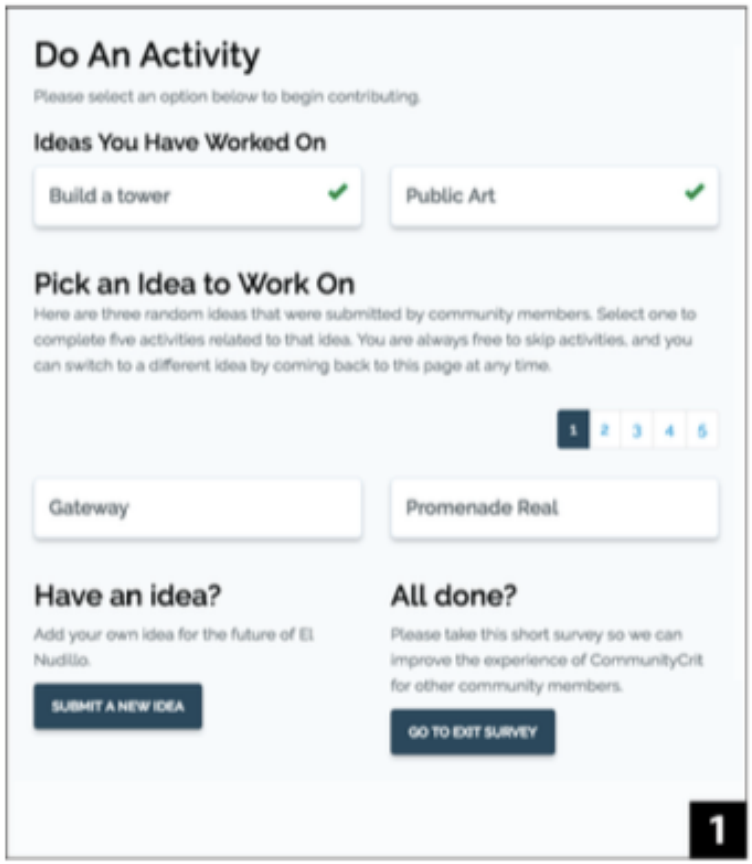
We are now engaging the public and local experts to develop the intersection of 14th Street, National Avenue, and Commercial Street, which marks the end of the 14th Street Promenade. This intersection —known as **El Nudillo**, or "the knuckle"—is envisioned as a pedestrian destination, a place of social gathering, and a celebration of East Village and its surrounding neighborhoods.

Steven Dow
Advancing Collective Innovation

UC San Diego

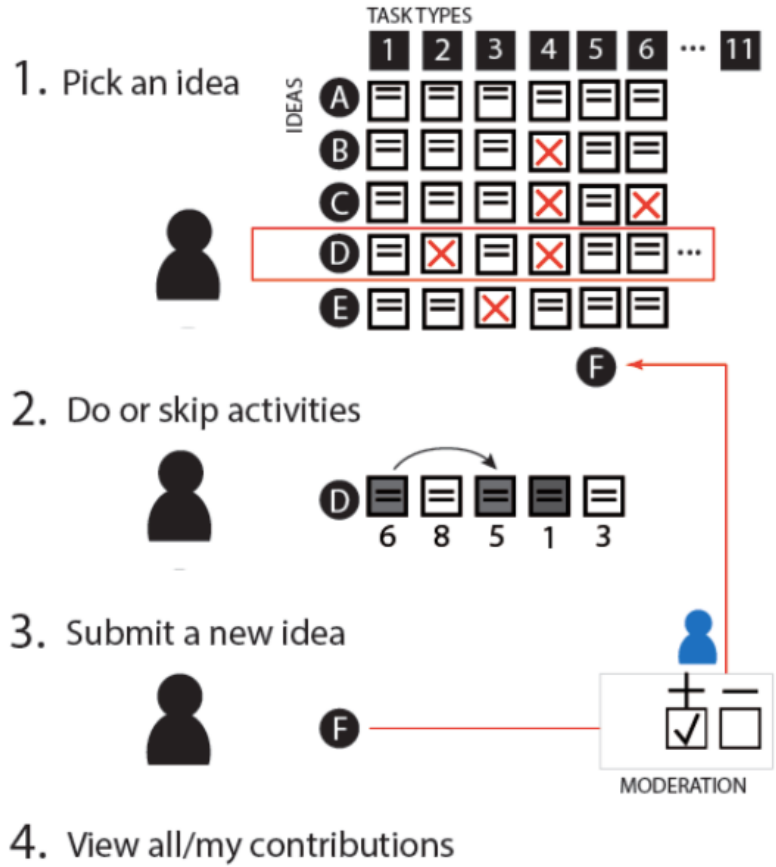
Participants perform micro-tasks around urban design concepts





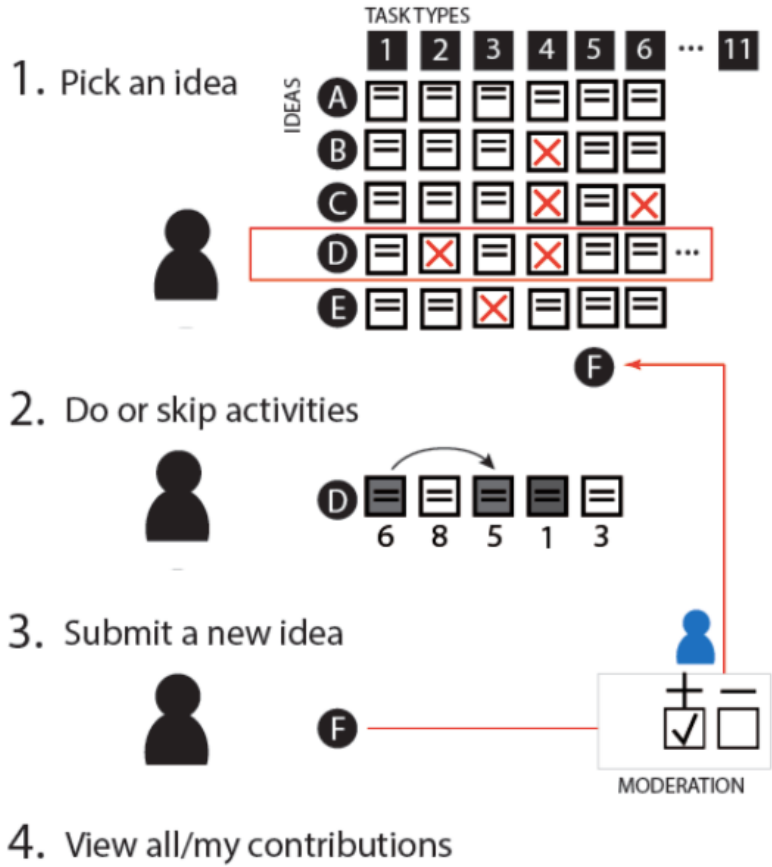
CommunityCrit: Inviting the Public to Improve and Evaluate Urban Design Ideas through Micro-Activities, Narges Mahyar, Michael R. James, Michelle M. Ng, Reginald A. Wu, Steven P. Dow. In Conference on Human Factors in Computing Systems (CHI'18), 2018.

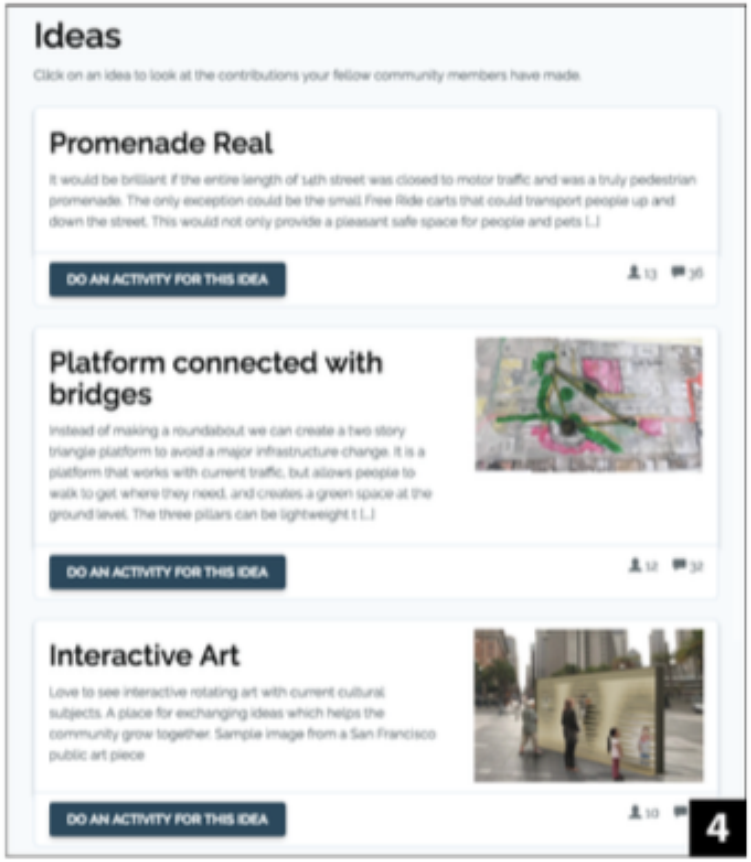
Participants perform micro-tasks around urban design concepts



CommunityCrit: Inviting the Public to Improve and Evaluate Urban Design Ideas through Micro-Activities, Narges Mahyar, Michael R. James, Michelle M. Ng, Reginald A. Wu, Steven P. Dow. In Conference on Human Factors in Computing Systems (CHI'18), 2018.

Participants perform micro-tasks around urban design concepts





CommunityCrit: Inviting the Public to Improve and Evaluate Urban Design Ideas through Micro-Activities, Narges Mahyar, Michael R. James, Michelle M. Ng, Reginald A. Wu, Steven P. Dow. In Conference on Human Factors in Computing Systems (CHI'18), 2018.

Participants liked that CommunityCrit allowed for small bursts of input

"I don't have time to go to workshops so it provides opportunity to give feedback". (P6)

I liked only having to answer 5 questions. I have conducted lengthy surveys myself and thought them to be excessive to the point of endangering the quality of data collection (respondents get bored, distracted, only want the "reward" etc.) (P2)

CommunityCrit: Inviting the Public to Improve and Evaluate Urban Design Ideas through Micro-Activities, Narges Mahyar, Michael R. James, Michelle M. Ng, Reginald A. Wu, Steven P. Dow. In Conference on Human Factors in Computing Systems (CHI'18), 2018.

Urban planners see value in public outreach

"Provides more tools for community outreach and for people to participate, and will give us a chance to present ideas that came out of CommunityCrit back to the public during the next workshop and facilitating a discussion around them." (E2)

CommunityCrit: Inviting the Public to Improve and Evaluate Urban Design Ideas through Micro-Activities, Narges Mahyar, Michael R. James, Michelle M. Ng, Reginald A. Wu, Steven P. Dow. In Conference on Human Factors in Computing Systems (CHI'18), 2018.

Urban planners see value in public outreach

"Provides more tools for community outreach and for people to participate, and will give us a chance to present ideas that came out of CommunityCrit back to the public during the next workshop and facilitating a discussion around them." (E2)

However...

"it gives a voice to people who are too lazy to get off the couch and come to the workshop" (E4)

CommunityCrit: Inviting the Public to Improve and Evaluate Urban Design Ideas through Micro-Activities, Narges Mahyar, Michael R. James, Michelle M. Ng, Reginald A. Wu, Steven P. Dow. In Conference on Human Factors in Computing Systems (CHI'18), 2018.

Enabling feedback from diverse stakeholders

Research papers:

Structuring, Aggregating, and Evaluating Crowdsourced Design Critique, Kurt Luther, Jari-Iee Tolentino, Wei Wu, Amy Pavel, Brian P. Bailey, Maneesh Agrawala, Björn Hartmann, and Steven P. Dow. ACM CSCW, 2015.

Exiting the Design Studio: Leveraging Online Participants for Early-Stage Design Feedback, Xiaojuan Ma, Yu Li, Jodi Forlizzi, and Steven P. Dow. ACM Conference on Computer Supported Cooperative Work and Social Computing, 2015.

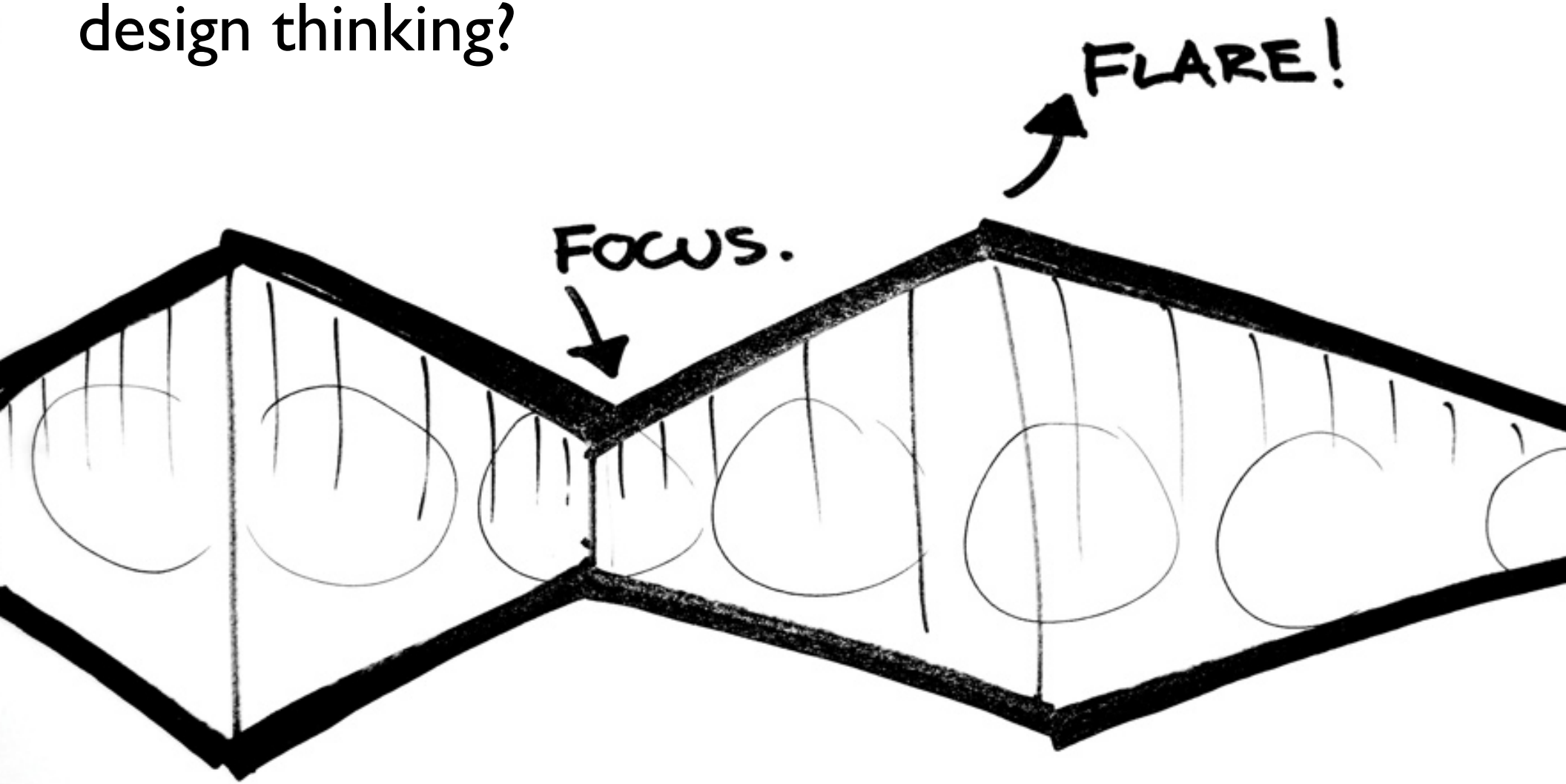
A Classroom Study of Using Crowd Feedback in the Iterative Design Process, Anbang Xu, Huaming Rao, Steven P. Dow, and Brian P. Bailey ACM Conference on Computer Supported Cooperative Work and Social Computing, 2015.

Crowd-Based Design Activities: Helping Students Connect with Users Online, Julie Hui, Elizabeth M. Gerber, and Steven P. Dow. In Conference on Designing Interactive Systems (DIS'14), 2014.

Almost an Expert: The Effects of Rubrics and Expertise on Perceived Value of Crowdsourced Design Critiques, Alvin Yuan, Kurt Luther, Sophie Vennix, Markus Krause, Steven P. Dow, and Björn Hartmann. In ACM CSCW 2016.

CommunityCrit: Inviting the Public to Improve and Evaluate Urban Design Ideas through Micro-Activities, Narges Mahyar, Michael R. James, Michelle M. Ng, Reginald A. Wu, Steven P. Dow. In Conference on Human Factors in Computing Systems, 2018.

How can we engage many stakeholders in design thinking?



Buxton, 2007
Laseau, 1974

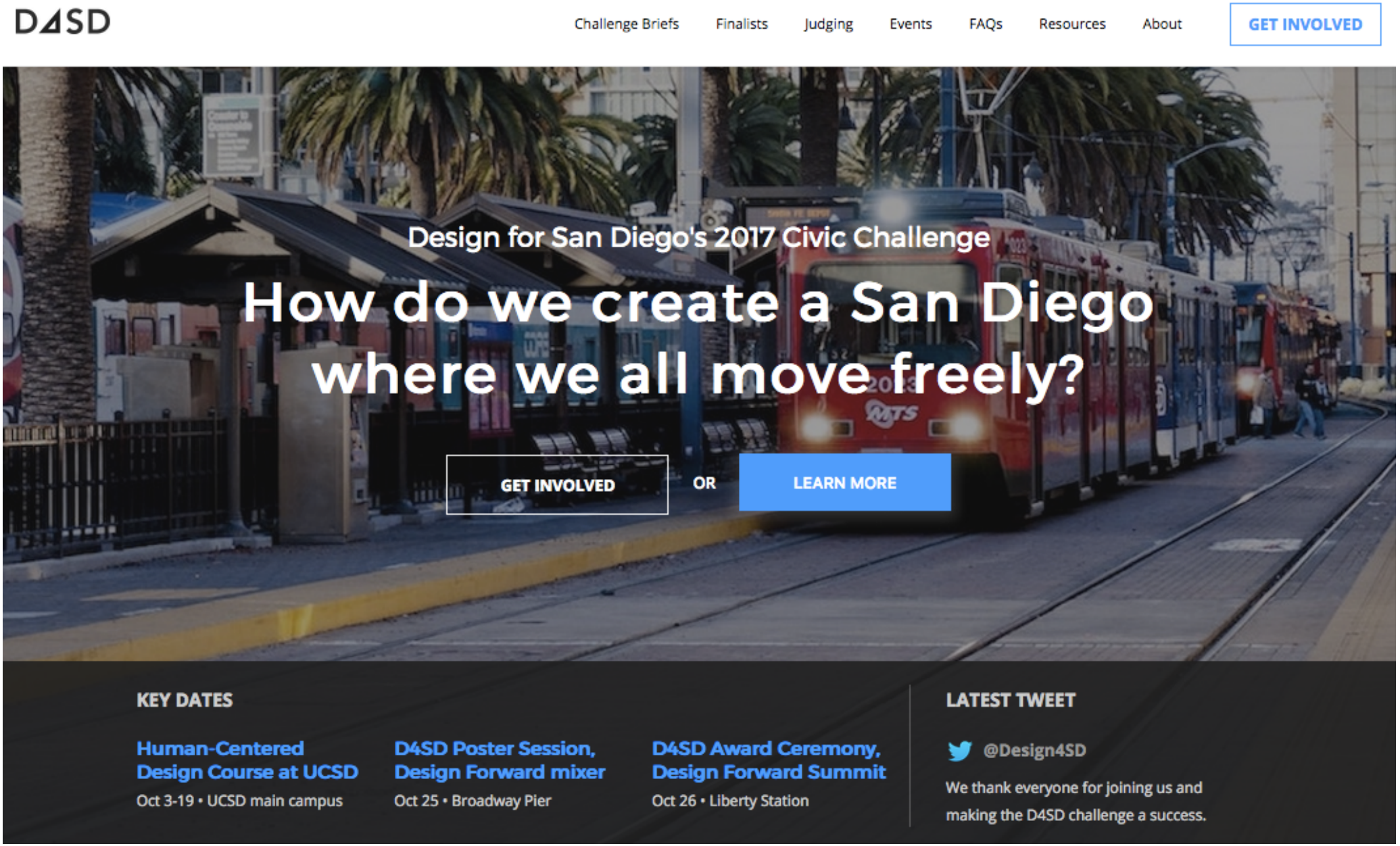
Supporting Collective Innovation

How can we harness collective intelligence, effort, and creativity to innovate on complex problems?

Supporting Collective Innovation

1. Discovering constraints and preferences at scale
2. Obtaining feedback from many diverse stakeholders
3. Exploring many solution paths in parallel
4. Gathering and synthesizing complex information
5. Making rational decisions as a community

6…


D4SD
Challenge Briefs
Finalists
Judging
Events
FAQs
Resources
About
GET INVOLVED
Design for San Diego's 2017 Civic Challenge
How do we create a San Diego where we all move freely?
GET INVOLVED
OR
LEARN MORE
KEY DATES
Human-Centered Design Course at UCSD
Oct 3-19 • UCSD main campus
D4SD Poster Session, Design Forward mixer
Oct 25 • Broadway Pier
D4SD Award Ceremony, Design Forward Summit
Oct 26 • Liberty Station
LATEST TWEET
@Design4SD
We thank everyone for joining us and making the D4SD challenge a success.


DASD

SCALE

SMART CITIES ACCELERATOR
LABS + ENVIRONMENT

The City of SAN DIEGO

NSF

SANDAG

PORT of SAN DIEGO


DASD
DASD
DASD
SAN DIEGO
PROMOTING WALK
How migh
improve s
on the stre


DASD


Rachel

CHALLENGE: Accessibility

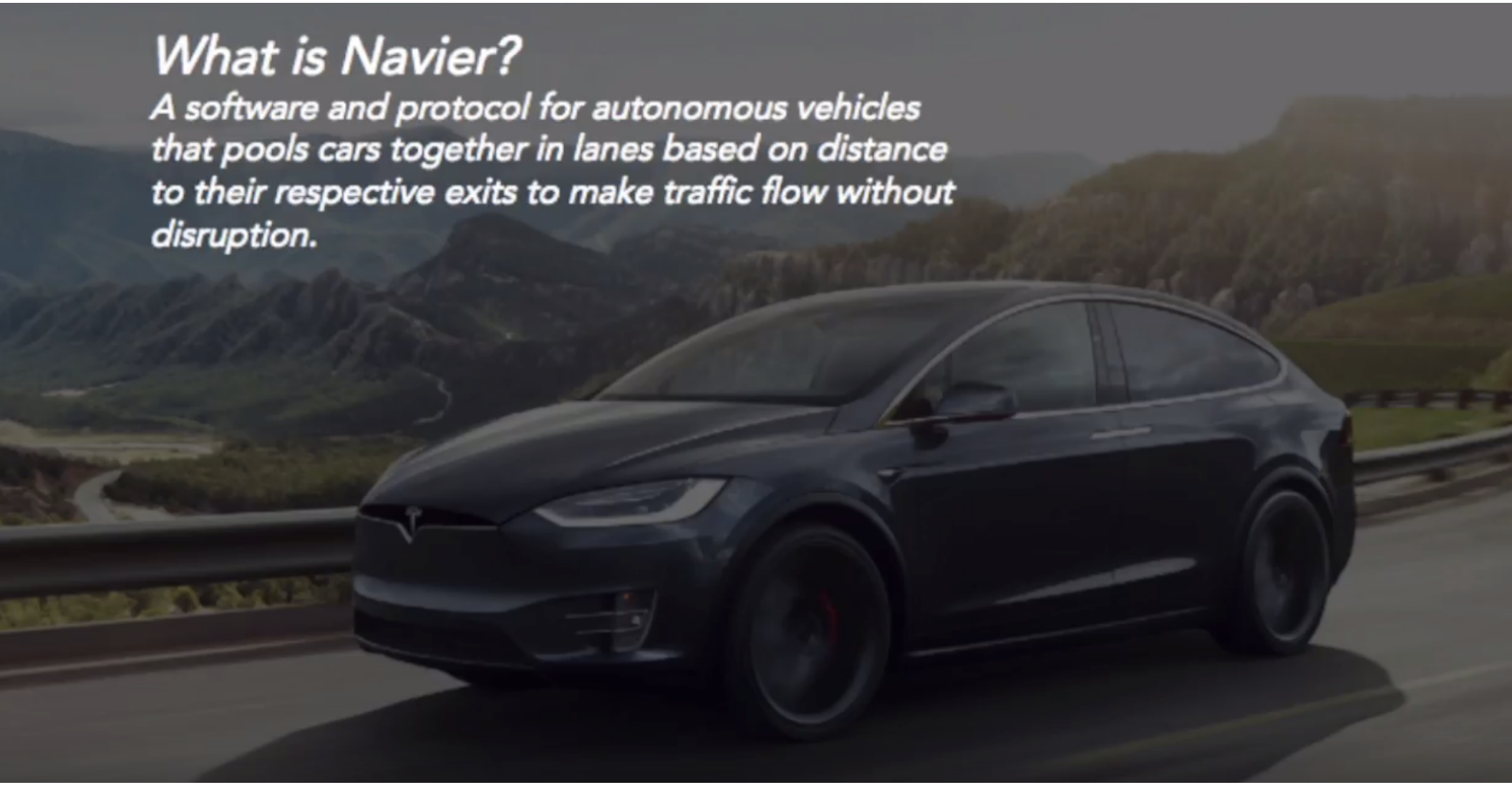
Beach Access For All

Daniel Lenzen, Andrea Flagiello, Matt Abbondanzio, Tomas Robinson

CHALLENGE: Preparing for AVs

Selene Hoover, Garret Hoover, Jessica Yeung

CHALLENGE: Preparing for AVs

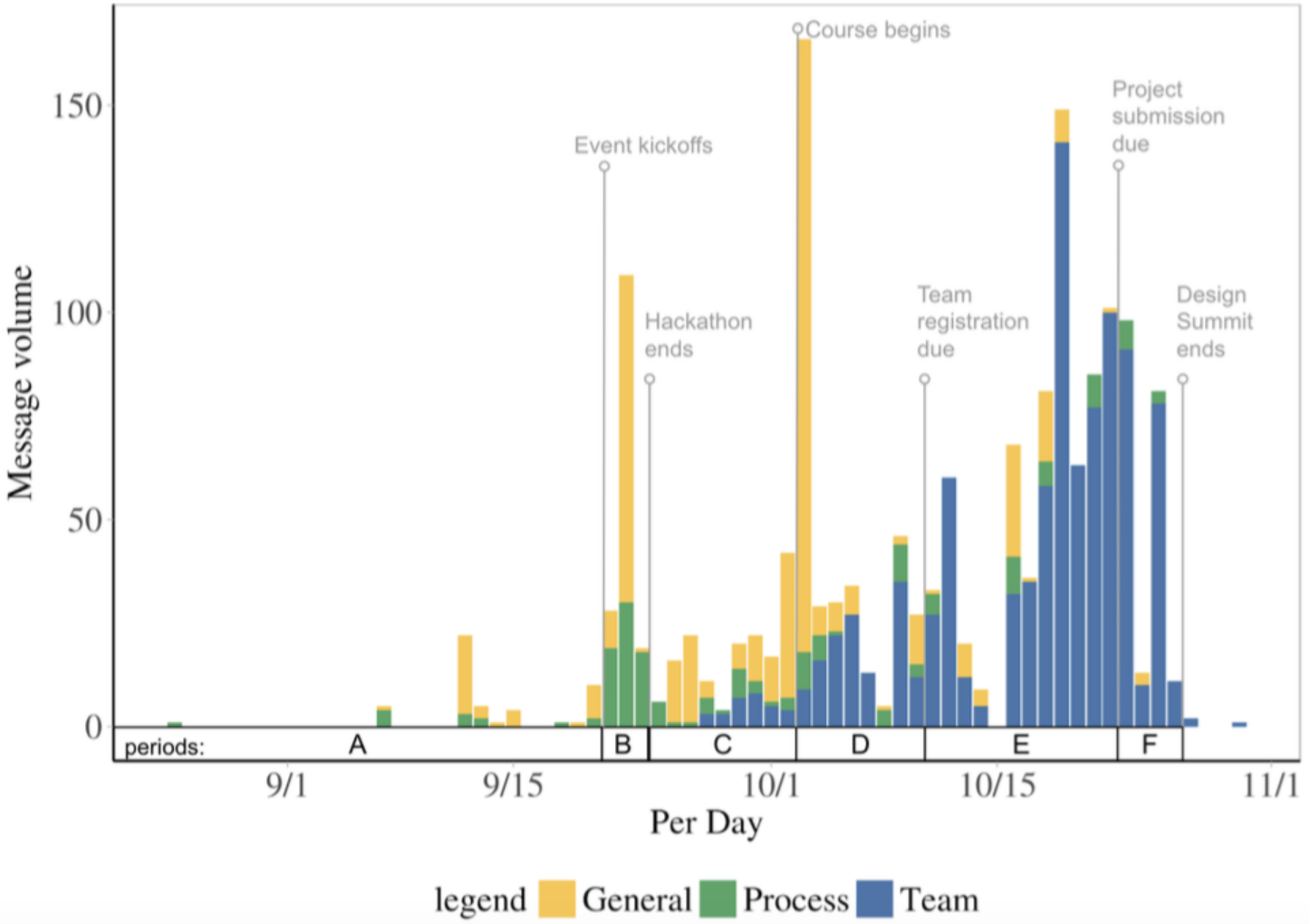


Lucien Eloundou, Roshan Fernando, and Ian Carrasco

CHALLENGE: Bike Safety

D.J. Nelson, Savera Soin, James Maron, Stephen Cerruti


$5000
1st
DASD
Design for San Diego
0001
Five Thousand
DOLLARS
First Prize Congratulations


Course begins
Project submission due
Event kickoffs
Hackathon ends
Team registration due
Design Summit ends
150
100
50
0
Message volume
periods:
A
B
C
D
E
F
9/1
9/15
10/1
10/15
11/1
Per Day
legend
General
Process
Team

Goals for D4SD

- Creating collective knowledge through competition
- Building social computing systems to facilitate
- Delivering a hybrid educational model
- Providing value for diverse stakeholders
- Combining ideas from design thinking, crowdsourcing, and organization science

D4SD

Get Ready for D4SD's 2020 Design Challenge

Design for San Diego (D4SD) is a city-wide human-centered design competition focused on exploring solutions to important civic challenges facing our region.

Innovators, volunteers, teachers, and sponsors... find out how we can improve the city together.

Learn More

Get Involved

How to Get Involved Now

- Register Now for the 2020 Design Challenge
- Offer Experiential Learning to Your Students
- Volunteer as a Mentor, Organizer, Judge, Writer...
- Sponsor D4SD to Promote Your Brand

Thank you!

spdow@ucsd.edu
@StevenDow

d4sd.org
protolab.ucsd.edu
designlab.ucsd.edu
spdow.ucsd.edu