



IDEAS: THE INNOVATION + DESIGN SERIES

San Francisco, California—January 25 & 26, 2011

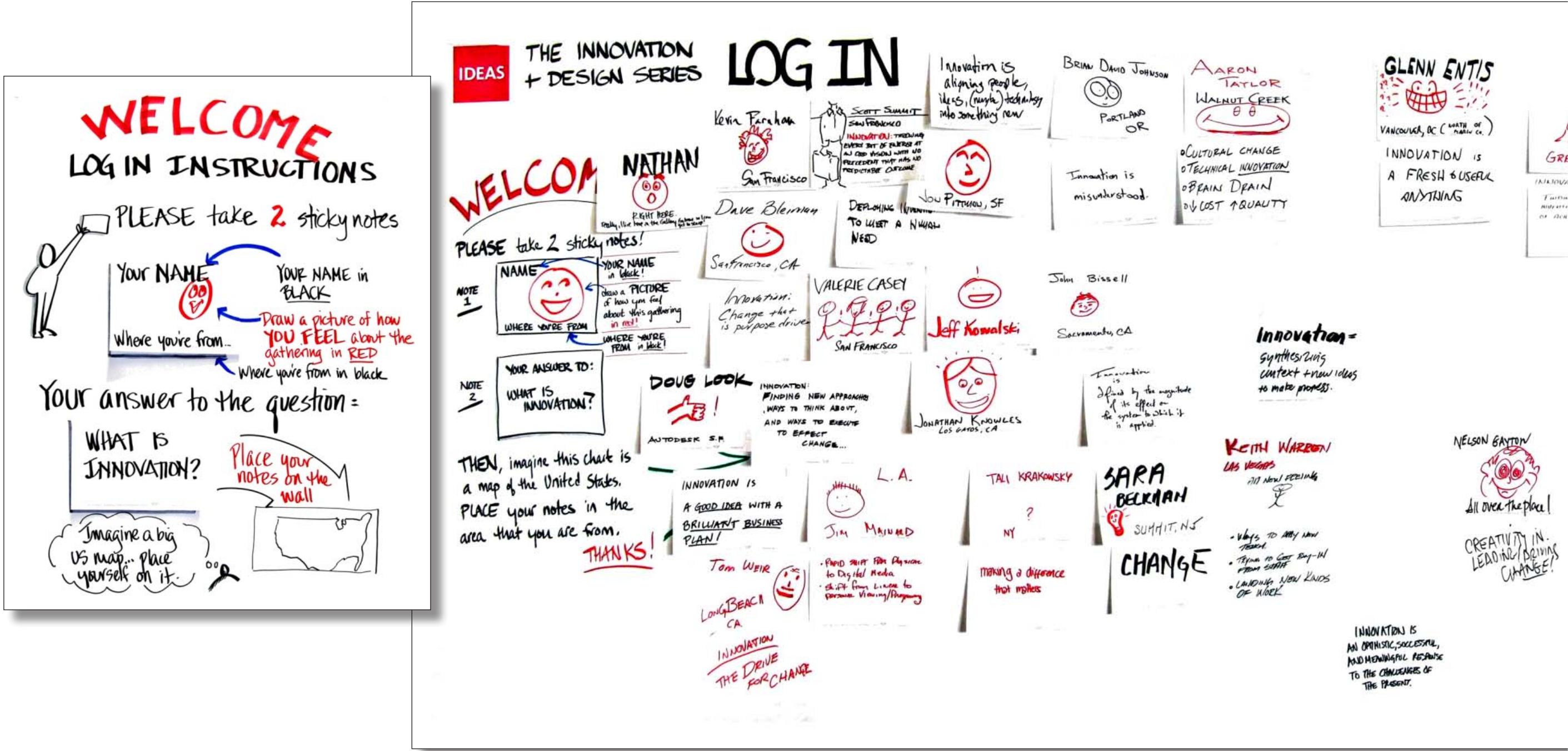


This is the visual record of the January Workshop of IDEAS 2011, an inspirational series of talks and activities about invention, innovation, design, and technology. The two-day summit was held at the Autodesk Gallery in downtown San Francisco. The charts reproduced in this report were created during the meeting itself. For more information about IDEAS: The Innovation + Design Series, please contact Jana Hawkins, jana.hawkins@autodesk.com. Photographs by Nirant Vora Photography. Used with permission.

CONFIDENTIAL Report by:




LOGGING IN



As attendees arrived, they were invited to “log themselves in” using large sticky notes. Each person created a simple portrait showing how they were feeling about the meeting along with their name and where they were from. On a second sticky note, participants answered the question, “What is innovation?” Each person then placed his or her notes on the wall in a rough approximation of the geographical area he or she came from.


LOGGING IN, continued

REG SMITH



INNOVATION:
SOME, FORGOTTEN, OR
THAT NEW WAY'S
CREATING A RESULT

ANDY HAY



TOWARDS
OUTWARD WORK


Innovation - Transformation of
Challenges into
Need - Quality
Innovation -
Innovation -
Innovation -

ALVISE SIMONDETTI

"ELVIS"

INNOVATION IS
DELIVERED
IDEAS

ERLEEN HATFIELD




NEW YORK

CHALLENGES

- INERTIA
- LACK OF RISK TAKING
- SMALL THINKING


HARV BEARSTEIN



WASHINGTON, DC


INNOVATION
RE-CREATING THE
WORLD
NEW IDEAS, NEW FORMS,
NEW TECHNOLOGIES

Phil Bernstein



NEW HAVEN, CT


CHRIS CONLEY



CHICAGO

INNOVATION IS DOING
SOMETHING NEW,
THAT BECOMES WIDELY
ADOPTED,
AND CREATES ECONOMIC
& SOCIAL VALUE.

RICHARD THOMAS



CINCINNATI, OH


INNOVATION:
GOOD TO GREAT...
again, and again, and
again

SCOSHIN CHOI

INNOVATION IS...

In Ovation.
'SCOSHIN CHOI

JIM SACCHI




HOUSTON, TX

INNOVATION

DISCOVERING THE
FUTURE

Jeffrey M'Grew




Oakland, CA

Maybe, creating value from
nothing

INDIA/BRAZIL

DHAVAL CHADHA



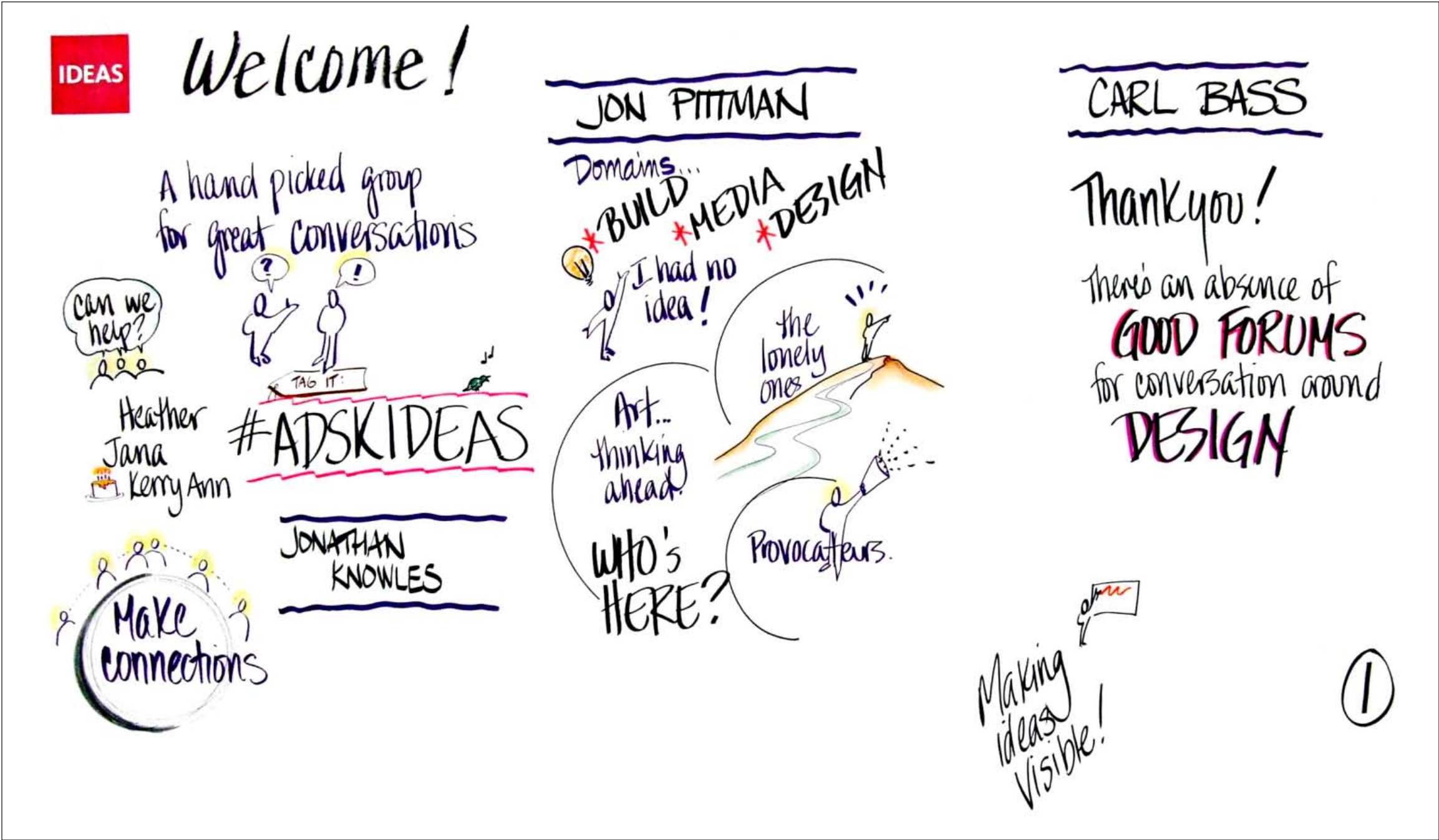
Where I
am not -
on the beach
in Rio...
and happily
so :)

INDIA + BRAZIL

CO-CREATION
INCLUSION
DISRUPTION

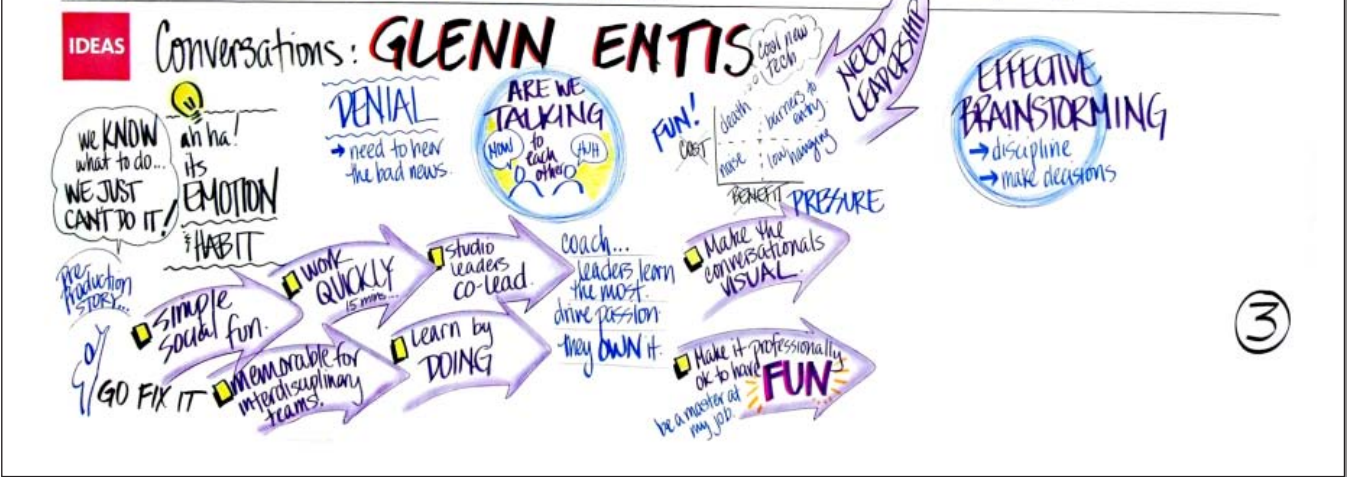
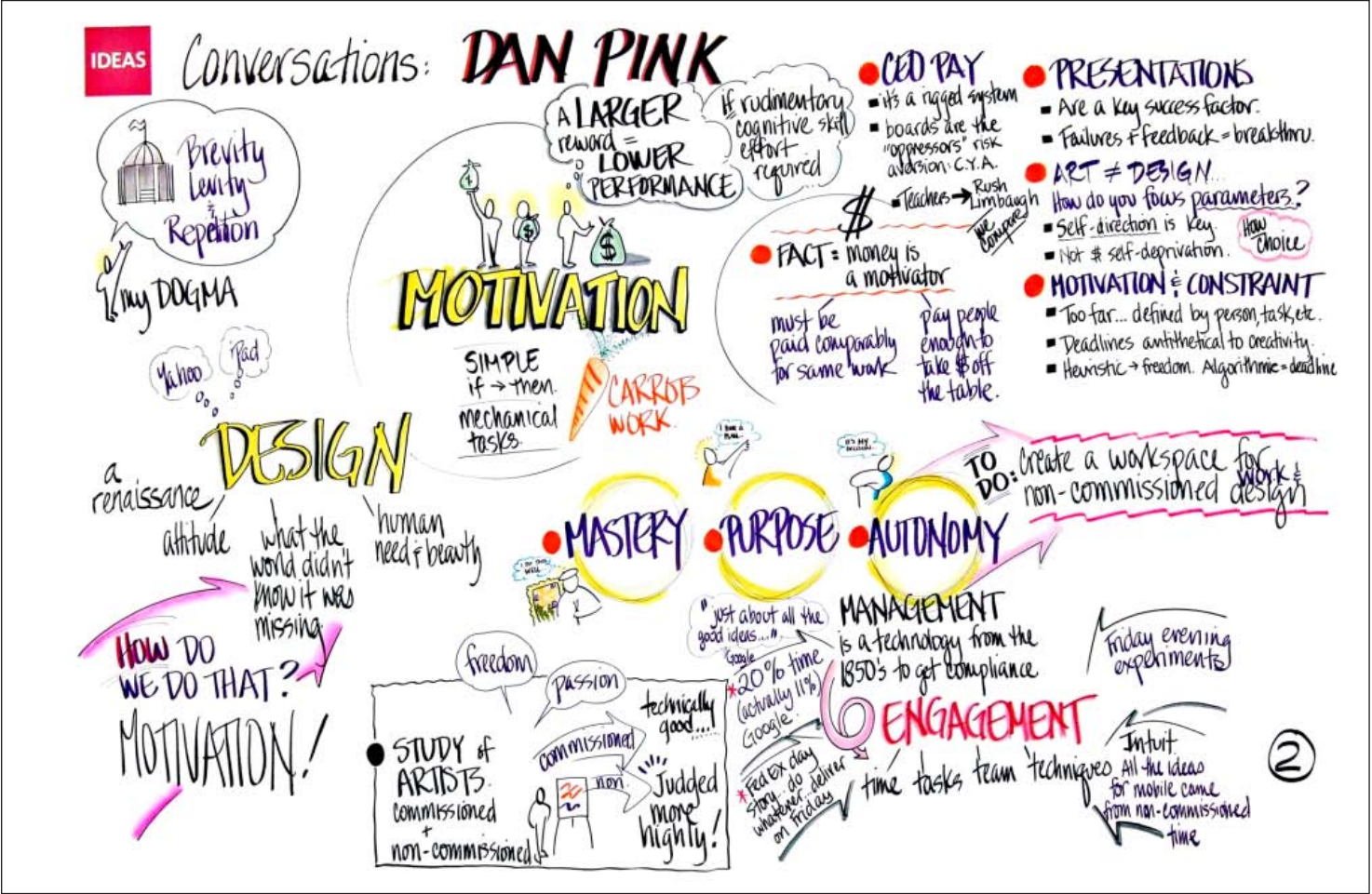
DESIGN
WITH
NOT
FOR

WELCOME



Autodesk Director of Strategic Initiatives Jonathan Knowles welcomed the group to the summit, describing it as a forum for great conversations among a hand-picked group of leaders. He introduced the official hashtag for the summit (#adskideas) and turned the floor over to Vice President of Corporate Strategy Jon Pittman, who identified the different domains of expertise represented in the room. Autodesk President and CEO Carl Bass gave a brief welcome, expressing his appreciation and noting that IDEAS provides a much-needed forum for deep conversation around design.

CONVERSATIONS: DAY ONE



The first day opened with a series of conversations about design and “design thinking.” Author Dan Pink opened with an inspiring keynote on what motivates people—and what doesn’t. He was followed by California College of the Arts faculty Nathan Shedroff, who spoke on employing design in a business setting, and Glenn Entis of Vanedge Capital, who showed how to integrate design into pre-production in innovative and fun ways.

PROTOTYPING I

IDEAS

Prototyping = TOM WUJEC

What is a Prototype?

① Industry survey

② Build a problem-solver

③ 90 second prototype presentations

JEFF NOWAK

VEHICLE PROTOTYPING.

It's been a tough year...

Ford

DIGITAL Prototypes

attributes

designing headlights & tail lights in tight computational models.

attributes

theme verification

craftsmanship

color

Paint in sun or shade

Dealer input

ANIMATION

DIGITAL MKT RESEARCH

moving stick globally... not 2,000 lbs cars

Emotive visualization

TODAY

Align people around a vision.

FUTURE

Virtual reality LCD

Attributes

10x prototyping

design multiplicity

Q Cycle time?

dropped & 12 mos. incredible strides

Q Prototype "feel" to drive?

Immersive model w/ dampening/motion

Q Manufacturing prototyping?

Model builds... virtual production lines

Q Also advances on INPUT side?

Just in time / not research.

Next stage... visual prototyping helps.

Q Physical attribute

Not sophisticated enough... visual works, but not mechanical behavior

Q Relation between car+city?

We build artificial environments = sets.

We put competitor vehicles in the same scene.

4

IDEAS

Prototyping = ALEX McDOWELL

ENTERTAINMENT INDUSTRY

5D

cross cultural

Immersive design

using emotive narrative media to create NEW STORY SPACES

Telling STORIES

we call it VISUALIZATION

DESIGNER AT THE FRONT END

discover physical properties

early pre-prod... → LAYERS of info in painting built on data

Underlay into 2D.

Not endless paintings! Model in 3D before art.

PAST: LINEAR

Set, film, edit, etc.

TODAY: All at once

know your whole environ

script, visual development

storyboard design viz-environment all in visual digital space

throw it away if you don't like it!

Virtual camera.

MINORITY REPORT

→ no script

→ let story evolve w/ imagery

BUILDING WORLDS...

using your hands to move imagery

question everything...

reduce change orders.

Parallel... movie industry & construction industry: better production values, same time & money

Wouldn't it be cool to do it in one spot?

16" model moving in the virtual world.

Upside down

Q Creativity in a system? → director dictates? Not a limiter... table of equals.

FUTURE

Intuitive stuff tracked by Excel spreadsheet

Enter the world you imagine as you build it

software catch-up

look at the world I've created!?

Designers aren't writers... but they can simulate

TRON

THE PITCH

5

Autodesk Fellow Tom Wujec opened the next part of the summit, which focused on prototyping. Jeff Nowak of Ford Motor Company began with an overview of how digital prototyping is used at Ford and the changes that have come about as a result. A lively question-and-answer session followed. Next, Alex McDowell of 5D described prototyping as it occurs in the film and entertainment industry, indicating how the process (called visualization) has changed over the years and hinting at where it is headed.

THE GROVE CONSULTANTS INTERNATIONAL

PROTOTYPING II

IDEAS

Prototyping: **BRIAN PENE**
COMPUTATIONAL DESIGN METHODS.

INSPIRATION
the WOOD ARTIST

BEYOND CODE!
FREEDOM
to explore!
extracting out style

PROCESING
extracting geometric style
w/o code.

TREES
Dryad...

can WE BUILD IT?
Metz example.
feedback ease of construction

Library of styles
BUILDINGS
and extract out STYLES to apply to DESIGNS.

other forms (like chairs)
apply it to

generative modeling language
complex shapes
HUBCAPS...
play with different designs

INSTANTANEOUS
feedback as you design

6

IDEAS

Prototyping: **CARLOS OLGUIN**
Genetically engineered machines & synthetic biology.

molecules.

Today
materials
Devices
System
Future

biometric co-polymers.
MAYA
repurpose engines to simulate

self cleaning paint
3D structures

PATTERNS

PROGRAMMABLE MATTER
pull the transistor out... does it work?

CONVERGENCE & TRENDS
designing kill cells for cancer.
consuming...not designing.
Hacky
Print

Prototyping: **GLENN ENTIS**
RAPID PROTOTYPING for GAMES.

STORY
I. Medal of Honor to VZ.
its too quiet!

DESIGN BANG
for the BUCK = RAPID PROTOTYP...

argue laugh create
SAND BOX

FAST
CHEAP
FOUSED
SOCIAL
TANGIBLE

engage all your senses
guns wands NIGHT GAMES.

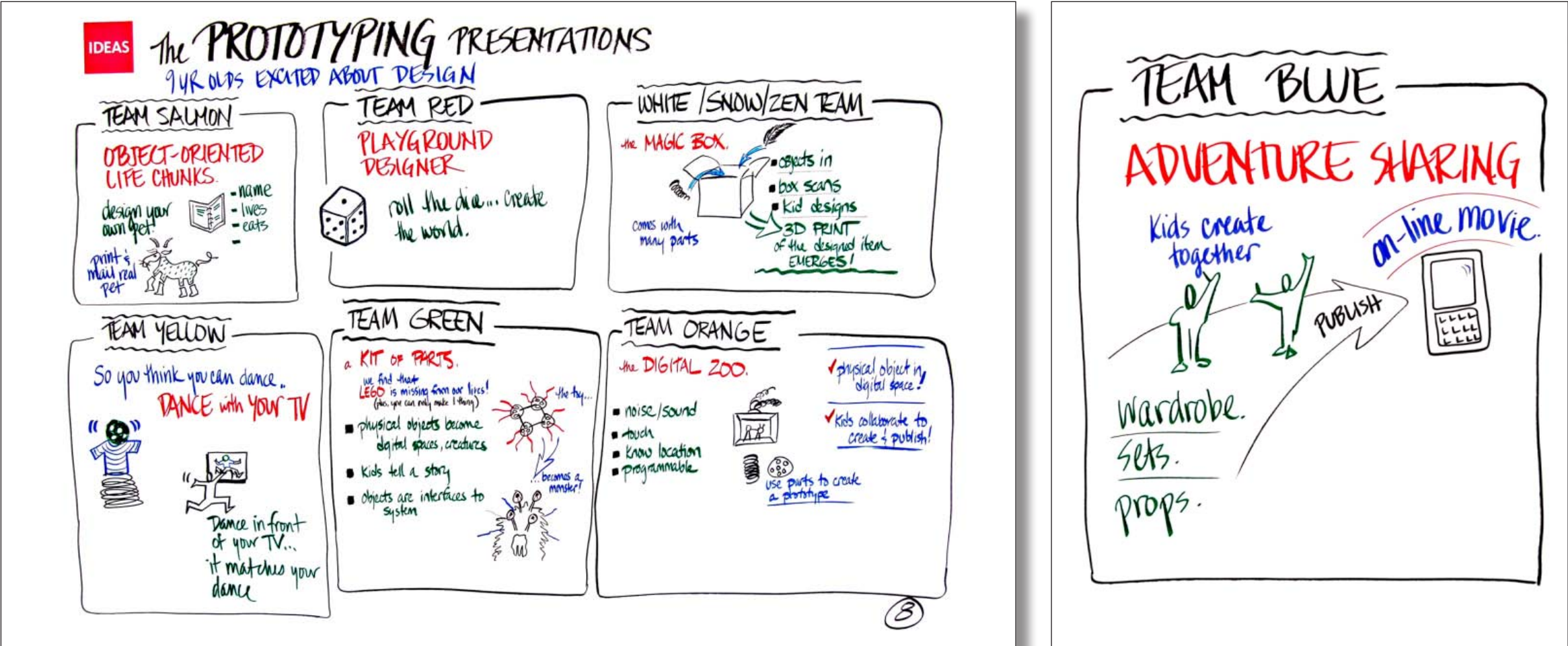
BARBIE + KEN on a stick to prototype Quidditch.

if its cheap... you don't need permission.
test a real design hypothesis.
a world of verbs where people make their own story?

7

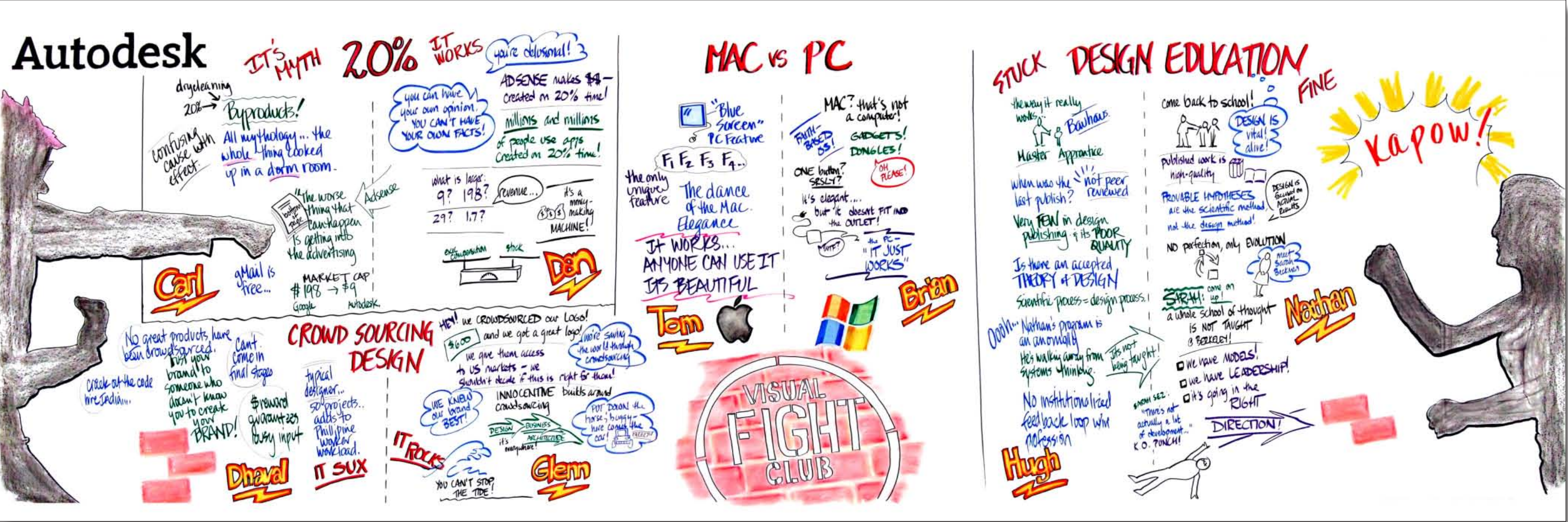
The conversation continued with Autodesk Research Strategist Brian Pene discussing how design can be extracted from an individual piece, added to a library of styles, and applied to different forms to rapidly create new pieces in the same style family. Carlos Olguin, also with Autodesk Research, described genetically engineered machines and synthetic biology, applying rapid prototyping to programmable matter and giving a glimpse of what the future may hold. The final prototyping conversation was led by Glenn Entis, who illustrated how rapid prototyping is used to develop different kinds of games.

PROTOTYPING PRESENTATIONS



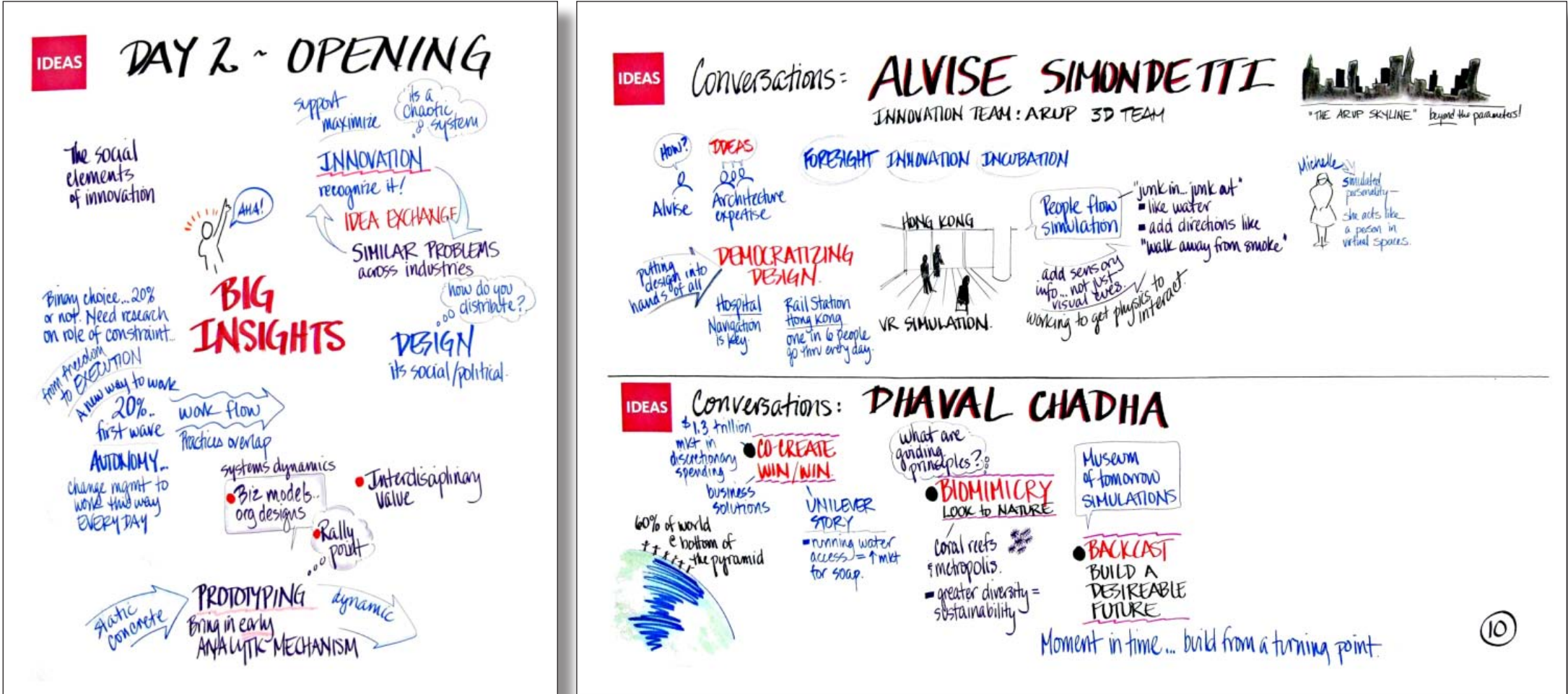
The afternoon included a rapid prototyping competition in which groups used everyday materials to design a game that would interest a 9-year-old in design. The seven groups presented their solutions to a panel of judges. Congratulations to Team Salmon, designers of Object-Oriented Life Chunks!

VISUAL FIGHT CLUB



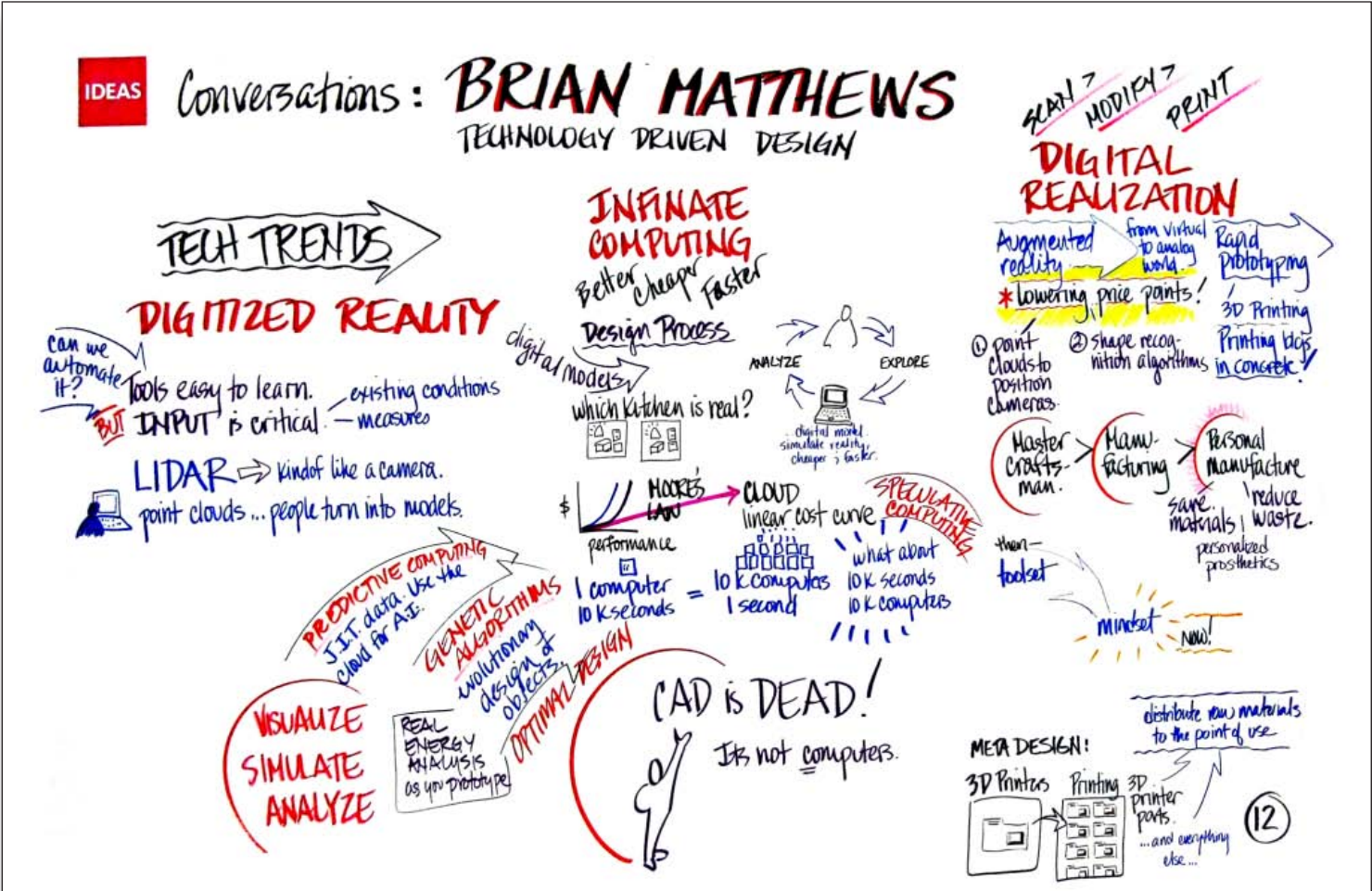
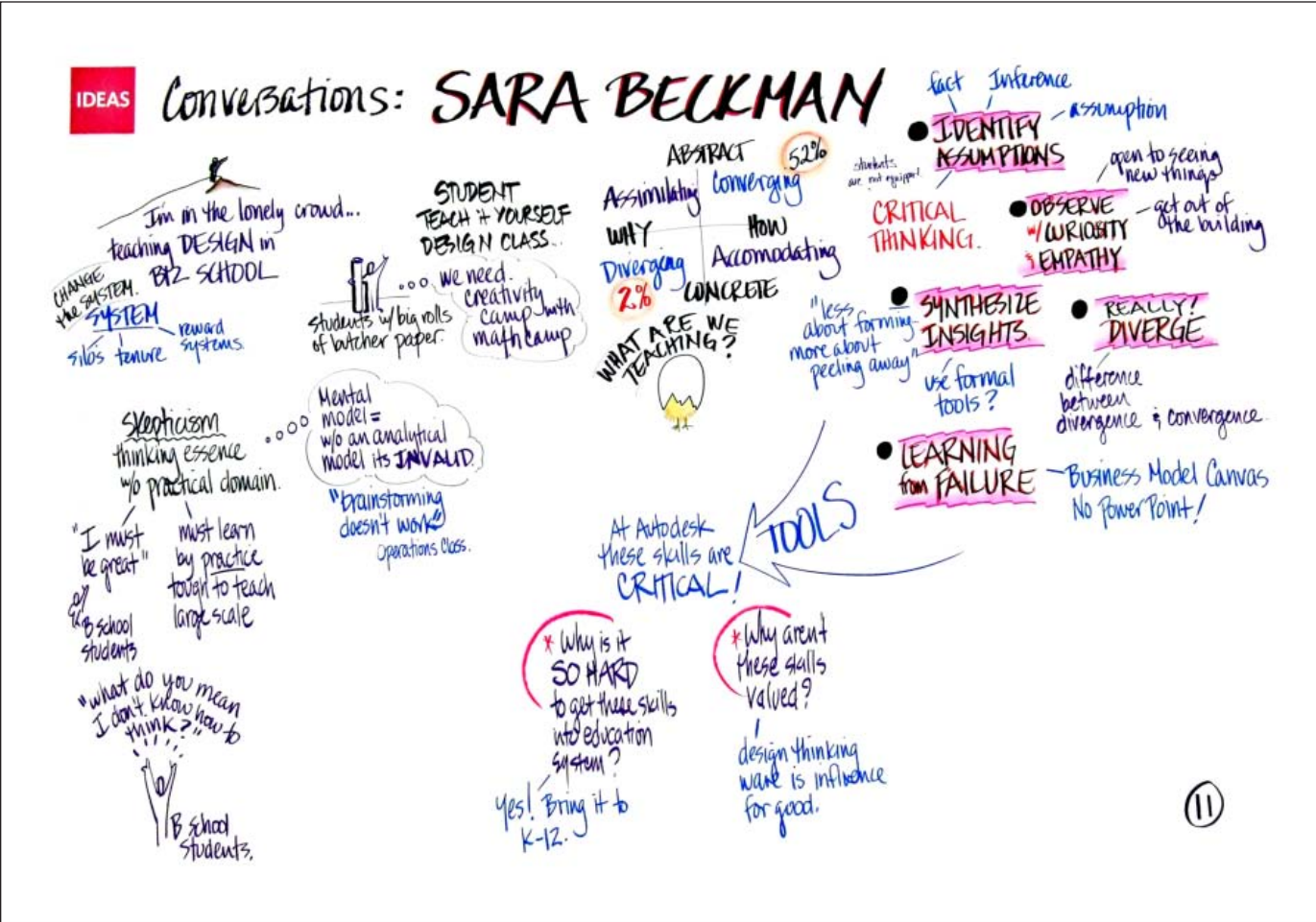
The evening launched with a fast-paced series of debates known as Visual Fight Club. Combatants paired off in a no-holds-barred verbal sparring match of two-minute statements followed by rapid-fire responses and rebuttals. Hot topics included Mac vs. PC; 20% Time: Myth or Not?; Crowd-sourced Design: Does It Suck or Does it Rock?; and Design Education: Stuck or Just Fine?

CONVERSATIONS: DAY TWO



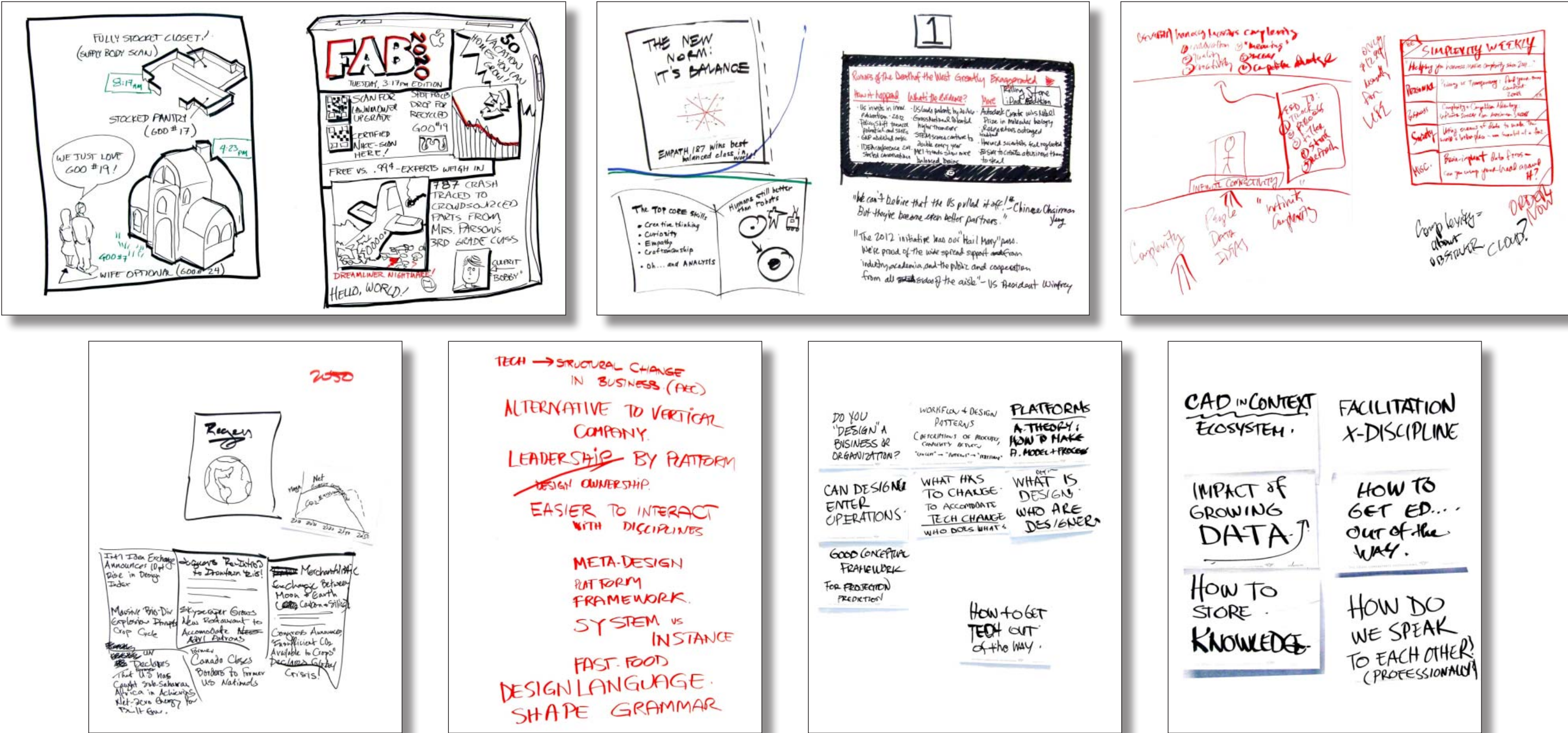
The second day opened with a discussion about insights gained the previous day. Alvis Simondetti of Arup demonstrated design and prototyping to develop architectural spaces, such as subway terminals and large buildings. Cria's Dhaval Chadha spoke about design as a process of co-creation, taking inspiration from biomimicry, and building a desirable future through the process of backcasting.

CONVERSATIONS: DAY TWO, continued



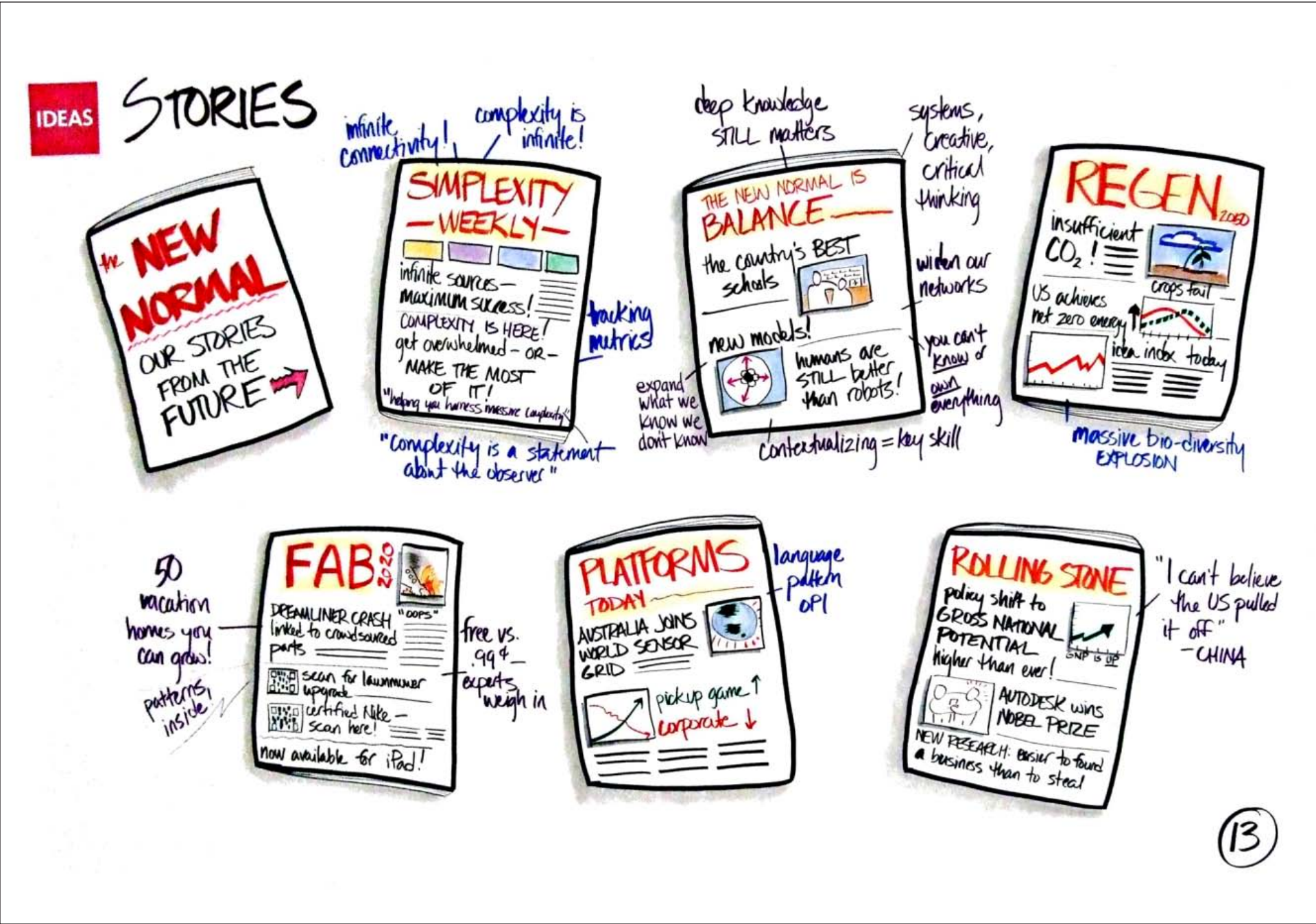
Sara Beckman of the Haas School of Business shared her experiences teaching design in business school, noting that as students develop design skills, they also develop critical thinking and other essential skills. Autodesk Labs VP Brian Matthews spoke about technology-driven design, illustrating three technology trends—digitized reality, infinite computing, and digital realization—that are changing the shape of design and prototyping.

STORY WORK



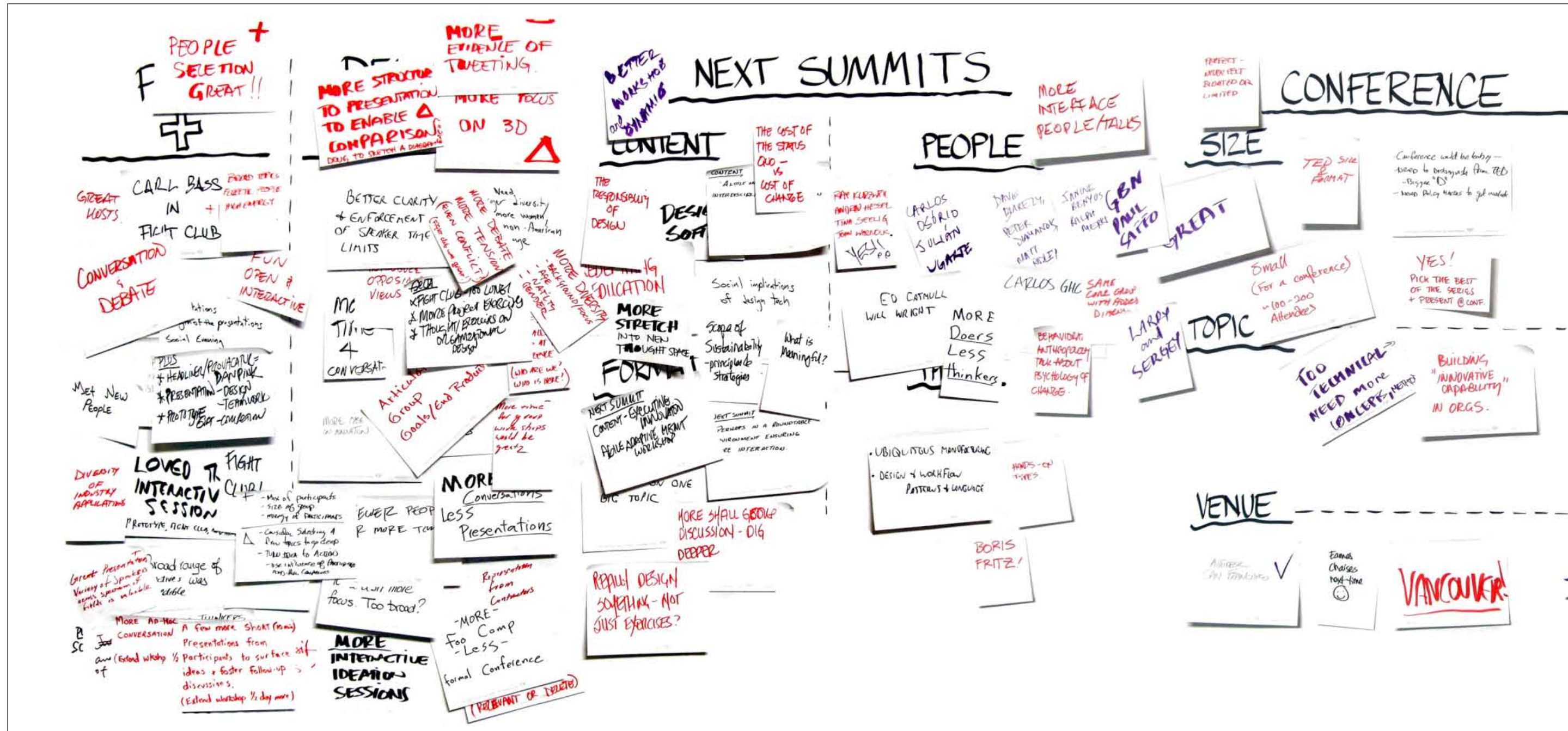
The afternoon workshop on the second day invited participants to envision the future by designing the cover and a two-page spread from a popular magazine in 2050. The group as a whole brainstormed big issues and questions around design, then grouped those into six categories. Each group took a category and developed a magazine layout to demonstrate what the world might look like once those issues were solved. Some of the issues are pictured here (bottom) along with a few of the groups' sketches (top).

OUR STORIES



As each group unveiled its magazine, the stories were captured on this chart. The headlines are optimistic, revealing the group's confidence in the power of design and the feeling that as conversations like the ones at this summit continue to take place, new innovations will arise to address today's challenges.

WRAPPING UP



The group's final task was to evaluate the summit and make suggestions for future meetings. Although some of the headings are obscured by the enthusiastic responses added to the chart, they include Plus/Delta, Ideas for the Next Summits, Conference, and Community.

WRAPPING UP, continued



PHOTO GALLERY



These photos were selected from among the many taken by photographer Nirant Vora Photography during the event. Used with permission.