Wharton
University of Pennsylvania

Design for Product Management

Professor Karl T. Ulrich

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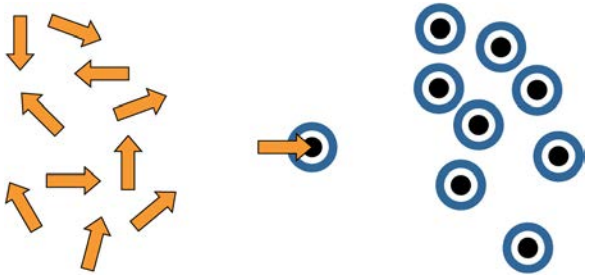
Problem Solving

"All life is problem solving." –Karl Popper

Innovation

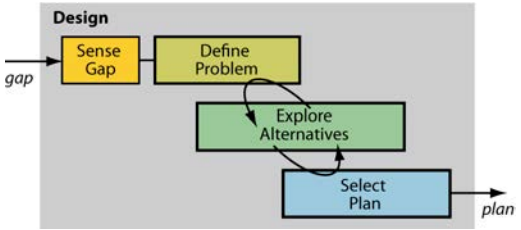
New match solution and need.



Design

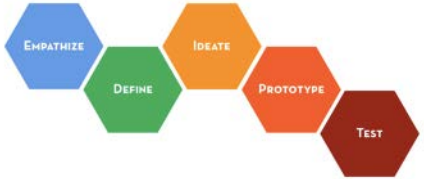
Innovation when pulling from needs.

Industrial design	Graphic design
Product design	Engineering design
Landscape design	Furniture design
	etc.



Design Thinking

Design process applied to something other than visible artifacts (e.g., services, processes, business challenges).



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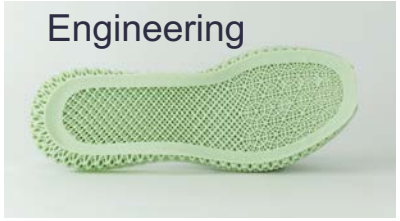
Function

Aesthetics

Physical Goods

Engineering



Product Design

Industrial Design
Identity

allbirds

“designer”

Product Design

Digital Products

Dev
Coding
Engineering

User Interface (UI)
User Experience (UX)

Visual Design

Graphic Design
Identity

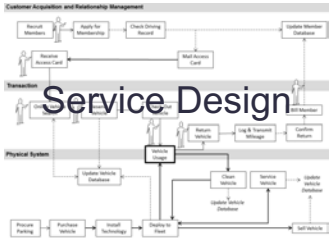
slack

slack

(e.g., Susan Kare – Pinterest)

Services

IT
Systems



Service Design

Graphic Design
Identity

aloft HOTELS

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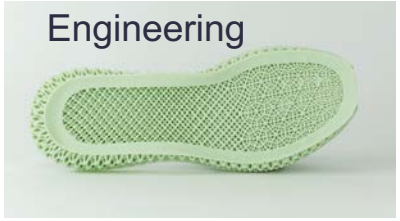
Function

Aesthetics

Physical Goods

Engineering



Product Design

Industrial Design
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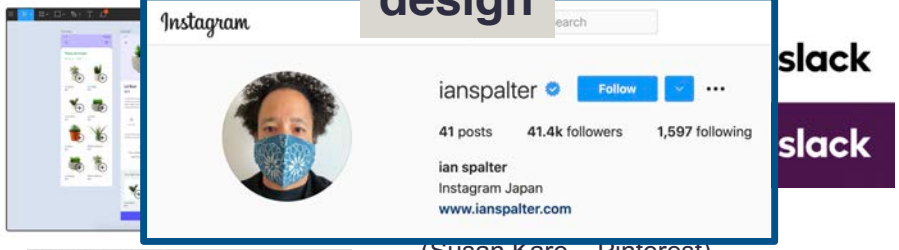

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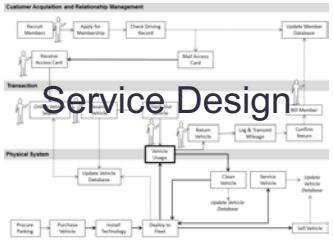
slack

(Susan Kare – Pinterest)

Services

IT
Systems



Service Design

Graphic Design
Identity

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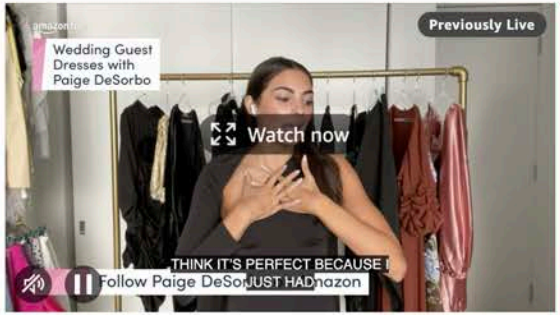

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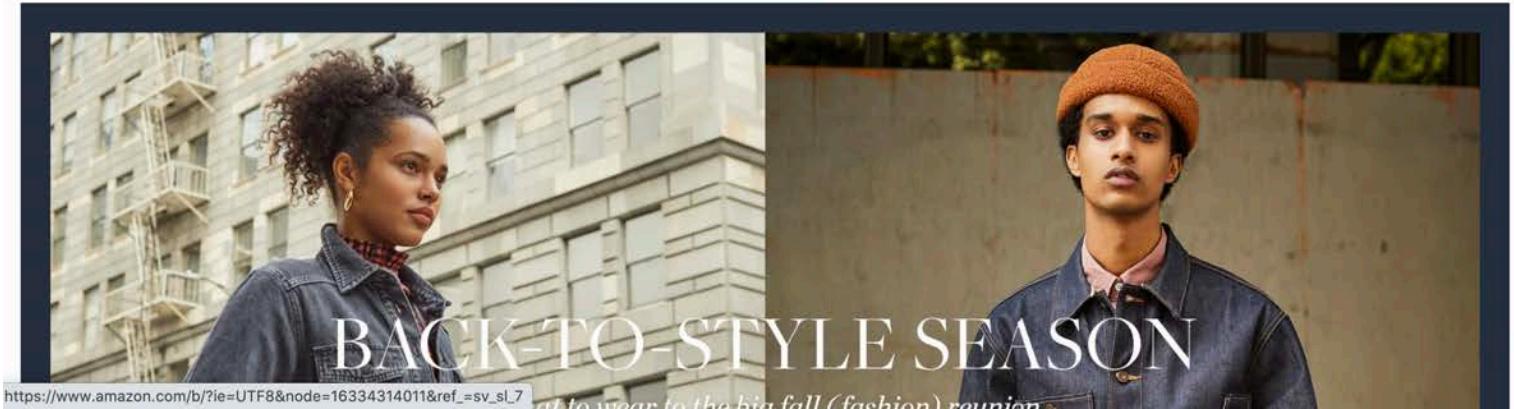

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Designers who “code” (e.g., css)

vs.

Figma and other tools.

David Cole
Former Head of Design at Quo

Designers Will Code

Should designers code? It's an im
that most designers can't and dor
argue about theoretical ideals, bu
debate irrelevant.

This is significant, because the ab
craftsmanship. It teaches you bot
Jeremy Bell of *Teehan+Lax* argues
way to work [1]:

> We spend hours designing for a
> start by producing mockups tha
> aesthetics but also how it works
> creative process.

NoCode.Tech

Tools

Pricing

Learn / Bubble / How to build a Quora clone without code

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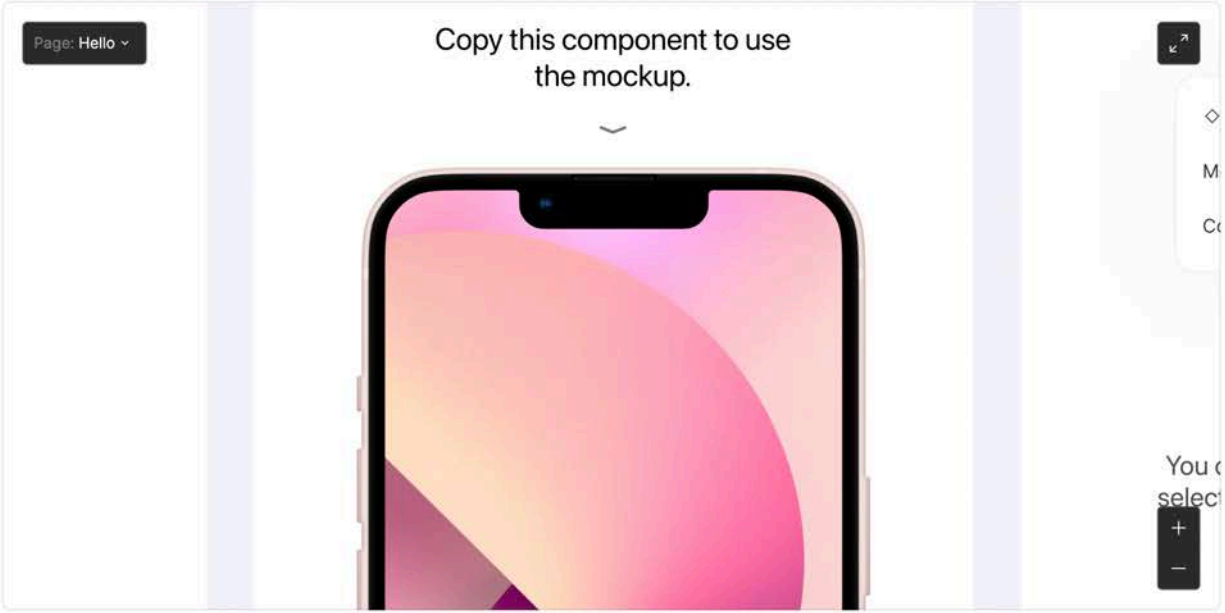

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Discussion

What product contexts justify “Ian Spalter” levels of investment in design?

What approaches can product organizations with fewer resources use to get 80/20 results?

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allbirds.com/collections/womens-running-shoes

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Running Shoes

Running Shoes
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Flats
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Slip-Ons
High Tops
Boat Shoes
Sandals

Filter By:

MATERIAL

- [ ] Light & Breezy Tree
- [ ] Soft & Cozy Wool

BEST FOR

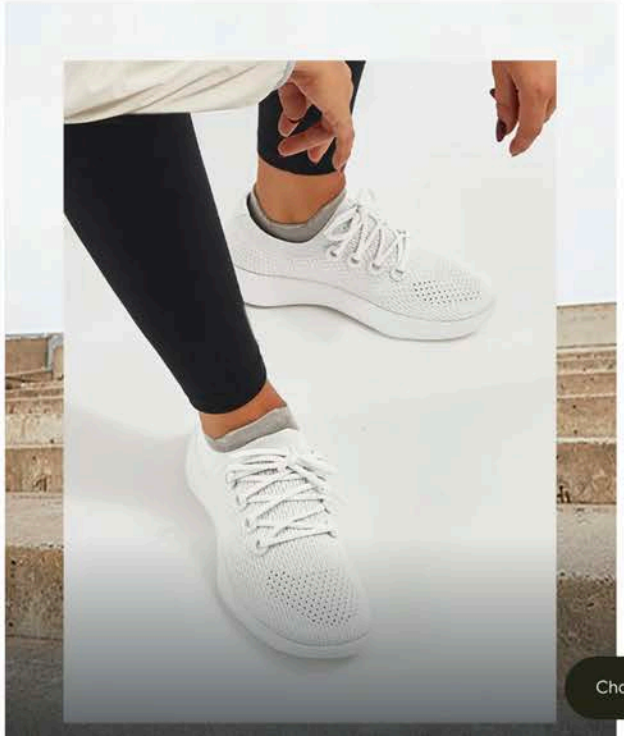
- [ ] Running
- [ ] Wet Weather

HUE

Women's Tree Dashers

Our running shoe designed with breathable Tree material.

Women's Tree Dashers
Mirage (Light Grey Sole)
$125



Chat

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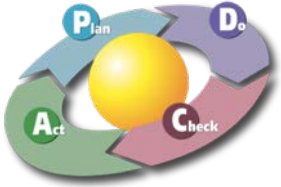
Alpha Assets – Start with the End in Mind



SENSE SOLVE SCALE SUSTAIN

SOLUTION

PROCESS

BRAND

CUSTOMER NETWORK

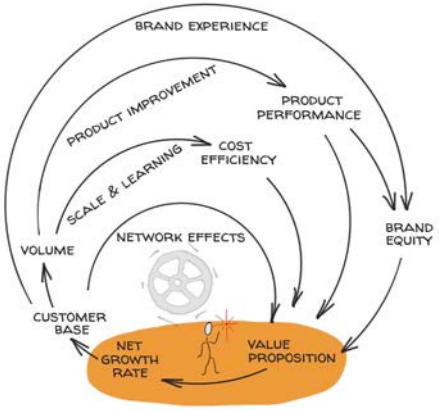
ORGANIZATIONAL PROCESSES

SCALE

CULTURE

allbirds

α

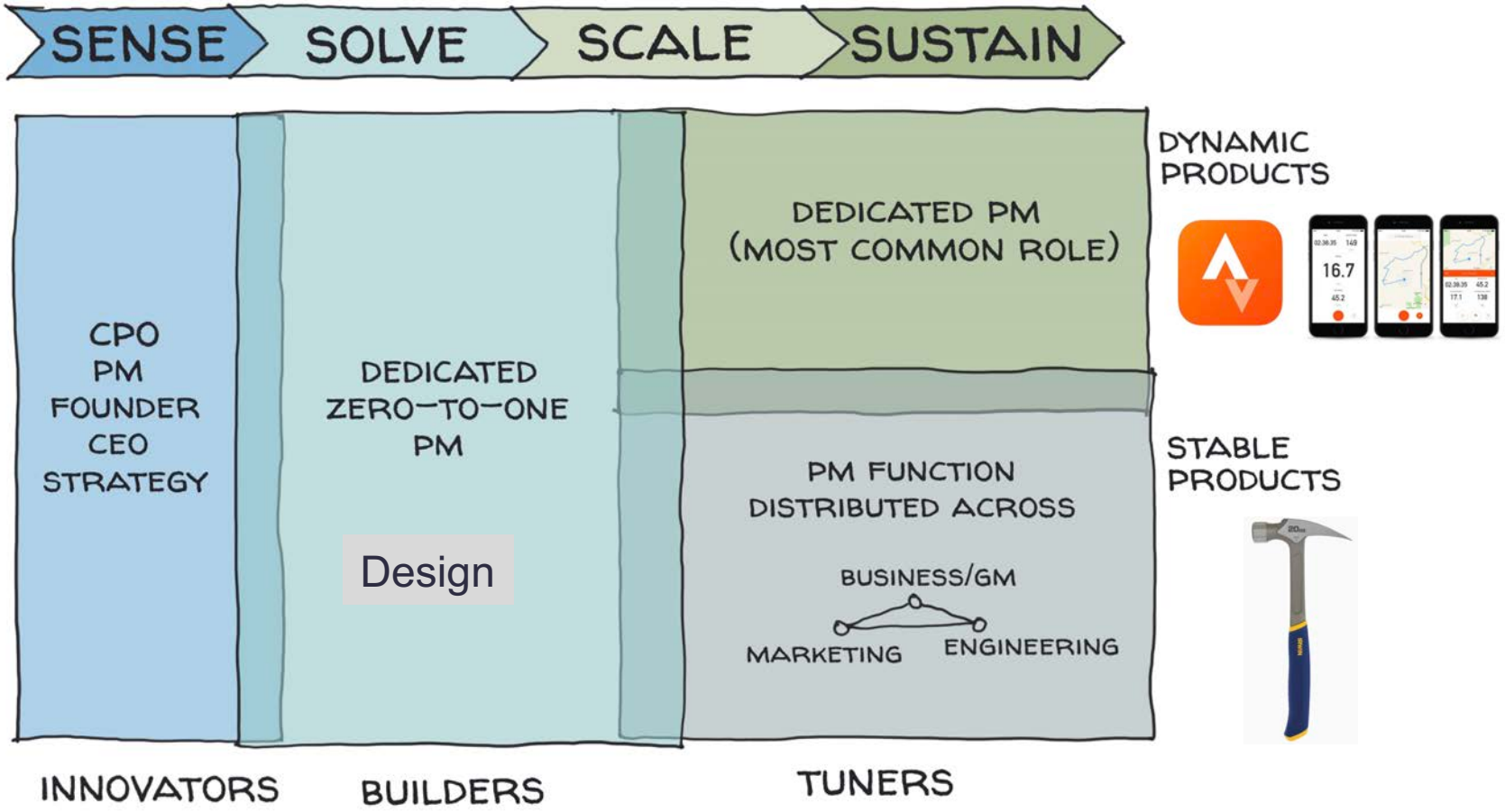


Core Principles of **design** (little d)

- Above all else make sure the user can do the job easily. Supremacy of clear, simple UI/UX, and fast tech that just works. *Calibrated intuition useful, but data wins.*
- Then, reinforce brand values with good aesthetics. (Plus, good aesthetics is an honest signal of other desirable attributes of the brand, e.g., care, quality, service.) *Helpful if you as PM know it when you see it. If not, enlist a network of friends and colleagues with great taste.*
- 80/20 on cost. Spend based on context (*Instagram* vs. *Allbirds* vs. *your side hustle*.) Agency pros are usually better, but can be really expensive.

Zero-to-One Physical Goods + Industrial Design

Design for PM

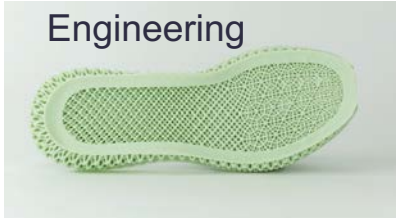


Function

Aesthetics

Physical Goods

Engineering



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Industrial Design
Identity

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"designer"

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User Interface (UI)
User Experience (UX)

Visual Design

Graphic Design
Identity

slack

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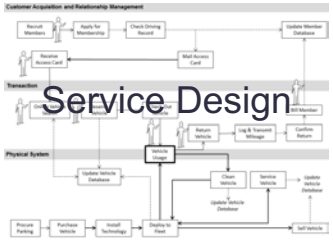
(e.g., Susan Kare – Pinterest)

Services

IT
Systems



Service Design

Graphic Design
Identity

aloft HOTELS

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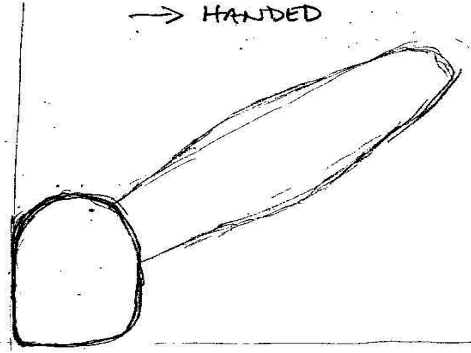
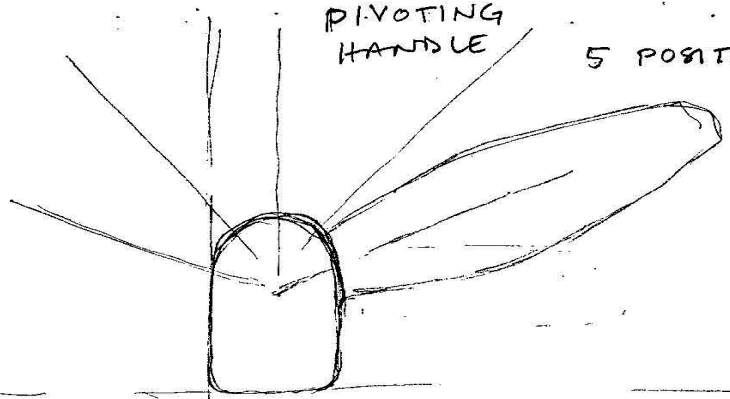
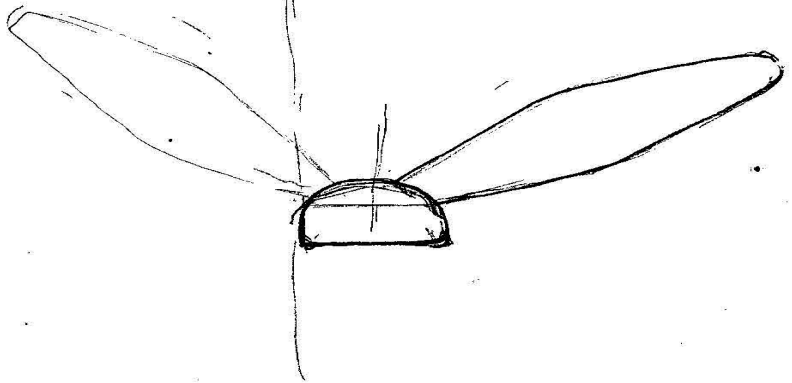
FIXED
OPTIMAL
→ HANDED

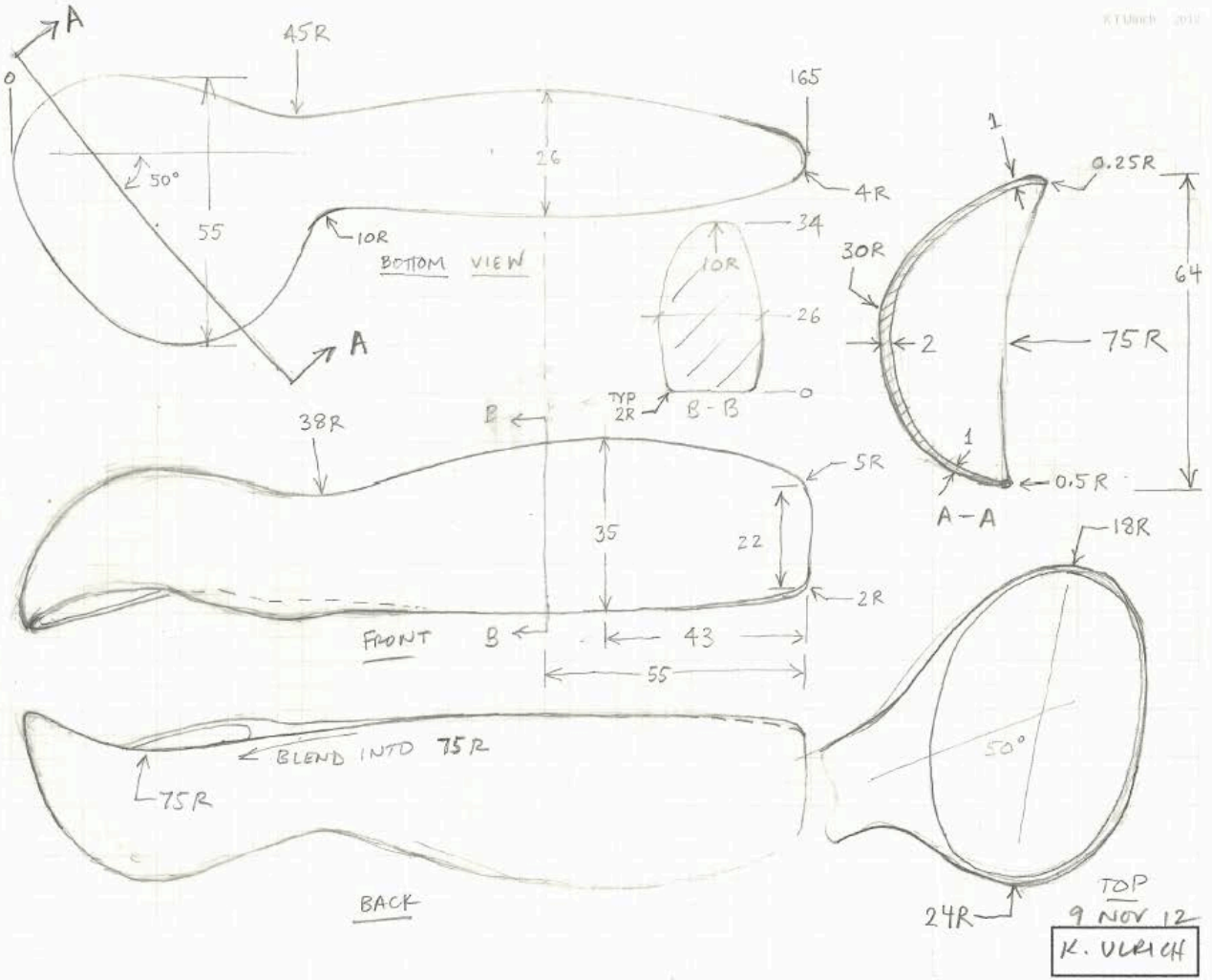


PIVOTING
HANDLE

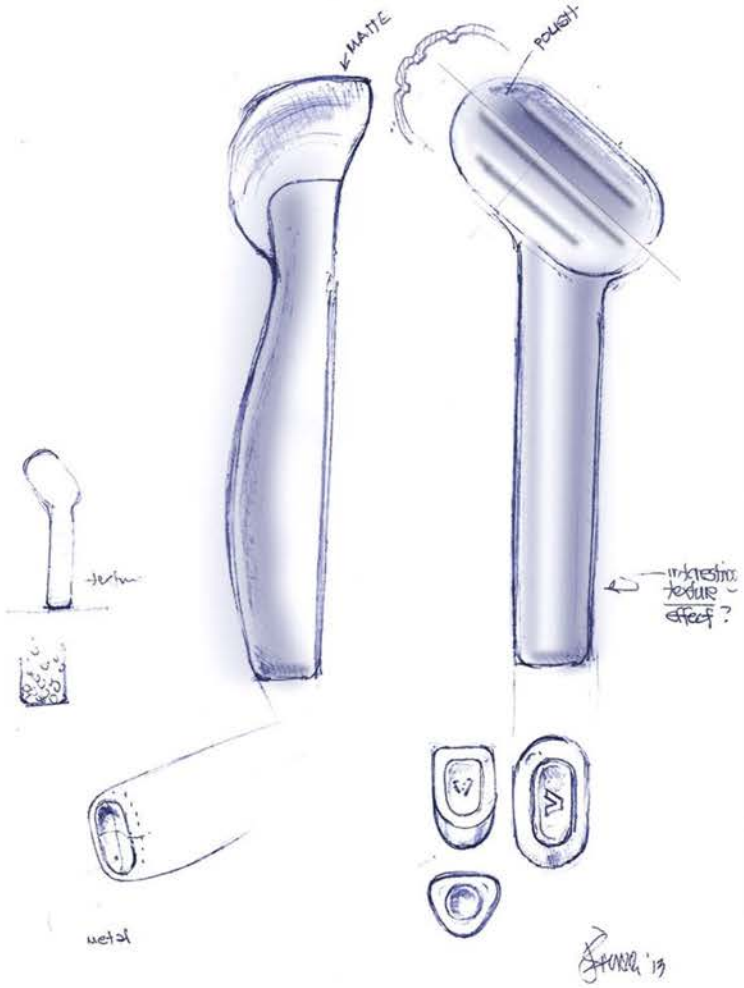
5 POSITIONS

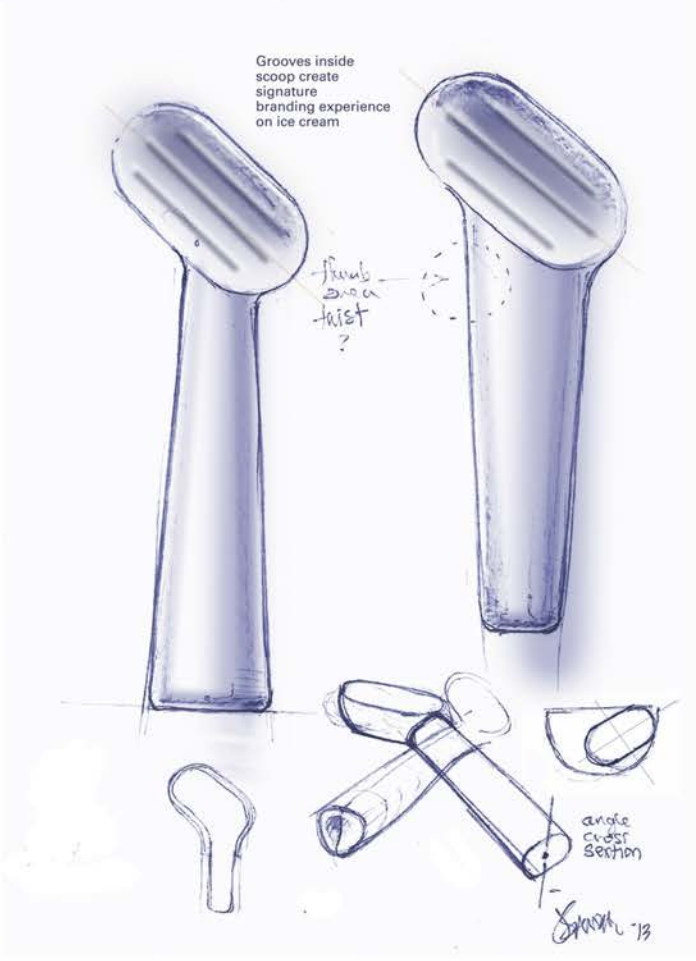





A
0
45R
165
26
4R
50°
55
10R
BOTTOM VIEW
A
34
10R
26
0
TYP 2R
B - B
1
0.25R
30R
64
2
75R
1
0.5R
A - A
38R
B
5R
35
22
2R
FRONT
B
43
55
18R
BLEND INTO 75R
75R
50°
BACK
TOP
24R
9 NOV 12
K. ULRICH

Initial brainstorm ideation

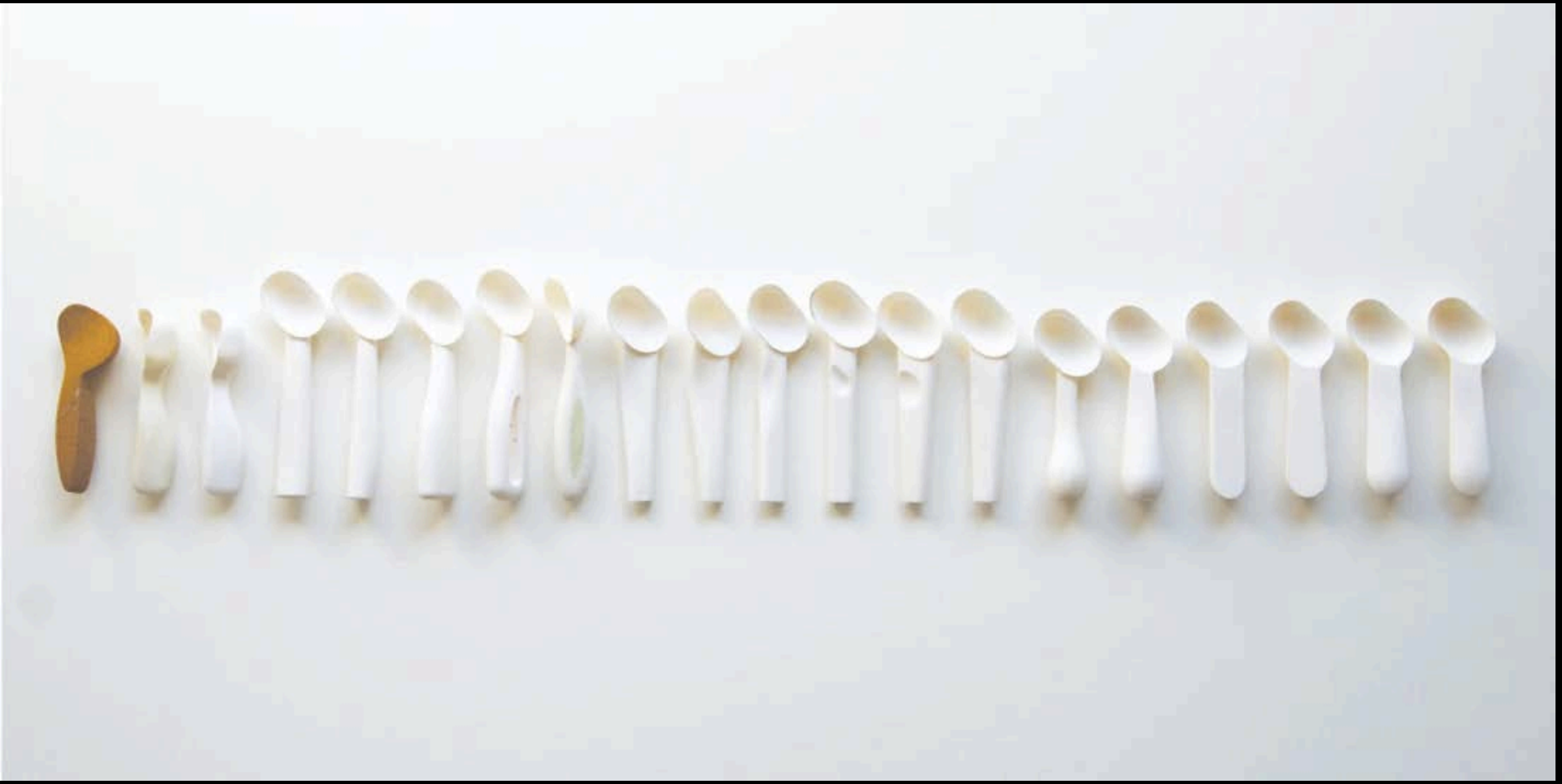

MATTE
POLISH
interesting texture effect ?
metal
'13


Grooves inside scoop create signature branding experience on ice cream
thumb area twist ?
angle cross section
'13

+ Distinctive (out OXO OXO!)
+ Speaks to ergonomics (out OXO OXO!)
+ Is ergonomic (out OXO OXO!)
- Challenging intersection between handle and scoop
- Lacking visual balance (a bit awkward)

+ A balanced Craft + Design philosophy
+ Memorable and pure
+ Ergonomics

belle•v



Breyers
QUALITY

鉛
不銹鋼

Copper + nickel plated
Hex Chrome Plated
B-Blasted
Electroless nickel
Hi polish + Anodization

https://www.kickstarter.com/projects/belle-v/belle-v-ice-cream-scoop

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Belle-V Ice Cream Scoop

by Belle-V Kitchen

Home Updates 11 Backers 1,289 Comments 58 San Francisco, CA Product Design

Funded! This project was successfully funded on Dec 8.

1,289
backers

$64,724
pledged of $5,000 goal

0
seconds to go

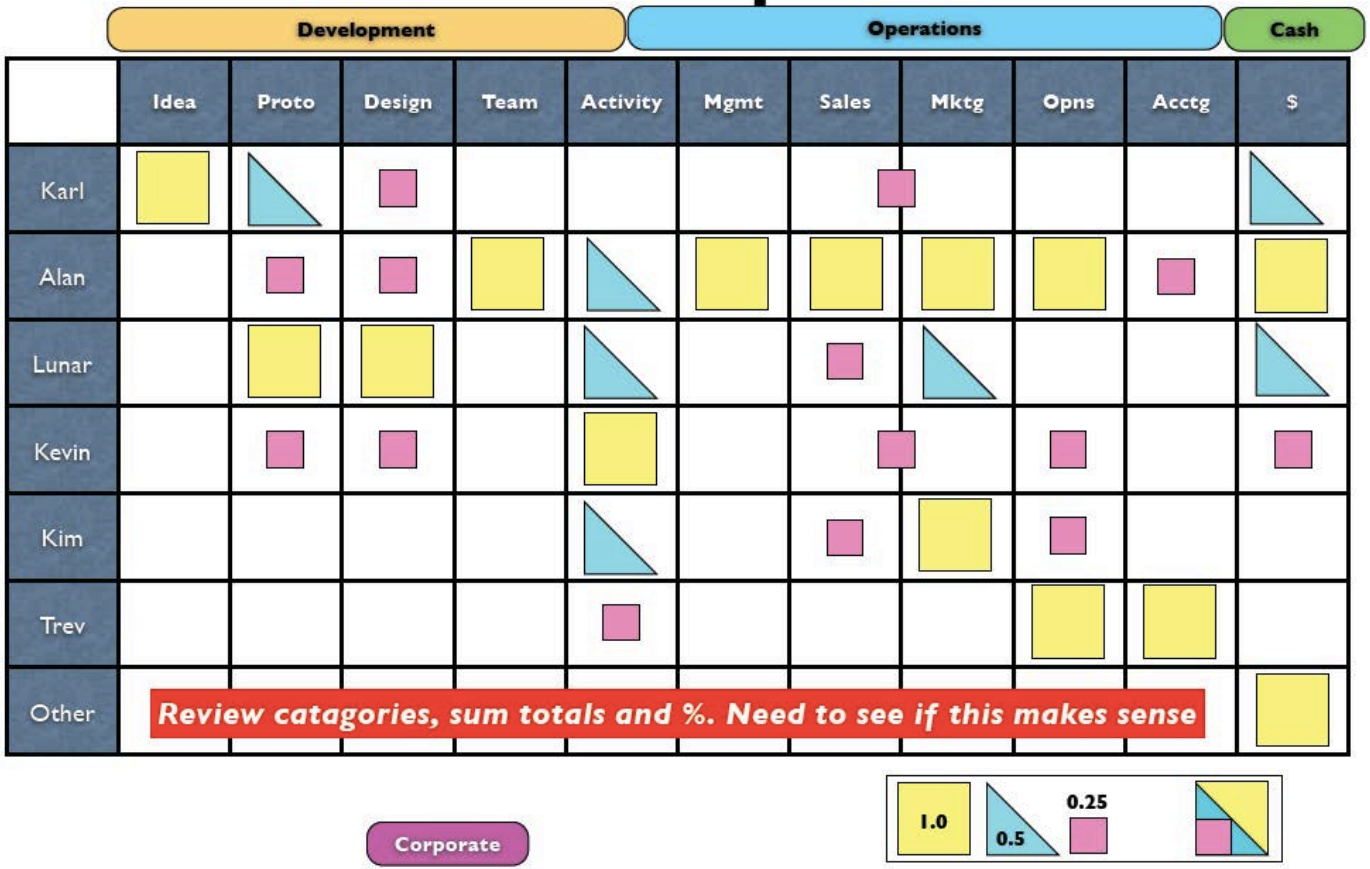
Project by
Belle-V Kitchen
Chicago, IL
Contact me

First created · 2 backed

2
handle great
scuff in head but
4
maybe
6
see in bright
9
customer would return this

!!! Concept for discussion only !!!

Ownership Model



(12) **United States Design Patent**
Ulrich et al.

(10) **Patent No.:** **US D713,219 S**
(45) **Date of Patent:** ** **Sep. 16, 2014**

(54) **ICE CREAM SCOOP**

(71) Applicant: **Belle-V**, LLC, Chicago, IL (US)

(72) Inventors: **Karl T. Ulrich**, Philadelphia, PA (US); **Jeffrey Allen Salazar**, Palo Alto, CA (US); **Alan J. Cook**, Chicago, IL (US); **Jeff Smith**, San Francisco, CA (US); **Kevin John Augustyniak**, Elma, NY (US); **Gerard Furbershaw**, Menlo Park, CA (US); **Kenneth D. Wood**, Portola Valley, CA (US)

(73) Assignee: **Belle-V, LLC**, Chicago, IL (US)

(**) Term: **14 Years**

(21) Appl. No.: **29/468,569**

(22) Filed: **Oct. 1, 2013**

(51) **LOC (10) Cl.** **07-99**

(52) **U.S. Cl.**
USPC **D7/681**

(58) **Field of Classification Search**
CPC A47J 43/282
USPC D7/680–696, 368, 669, 395, 393; 30/324–328; 425/187, 276–286, 299, 425/DIG. 13; 294/176–180
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D475,899	S *	6/2003	Ming-Shiue	D7/681
D501,374	S *	2/2005	Crowley	D7/681
D505,303	S *	5/2005	Crowley	D7/681

* cited by examiner

Primary Examiner — Terry Wallace
(74) *Attorney, Agent, or Firm* — Michael J. Femal; Much Shelist

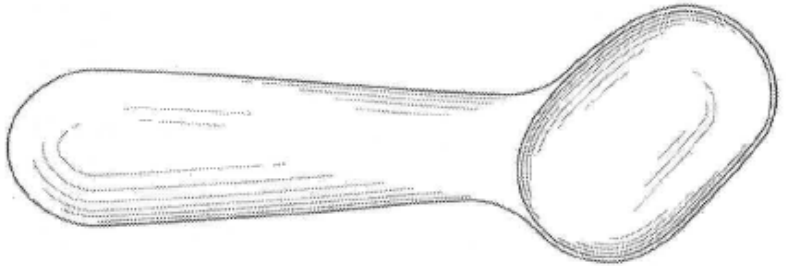
(57) **CLAIM**

The ornamental design for an ice cream scoop, as shown.

DESCRIPTION

FIG. **1** is a perspective view of an ice cream scoop with a two piece handle showing our new design;
FIG. **2** is a right side elevation of the ice cream scoop of FIG. **1**;
FIG. **3** is a left side elevation of the ice cream scoop of FIG. **1**;
FIG. **4** is a top end view of the ice cream scoop of FIG. **1**;
FIG. **5** is a bottom end view of the ice cream scoop of FIG. **1**;
FIG. **6** is a top view of the ice cream scoop of FIG. **1**; and
FIG. **7** is a bottom view of the ice cream scoop of FIG. **1**.
FIG. **8** is a perspective view of an ice cream scoop of an unitary construction showing our new design;
FIG. **9** is a right side elevation of the ice cream scoop of FIG. **8**;
FIG. **10** is a left side elevation of the ice cream scoop of FIG. **8**;
FIG. **11** is a top end view of the ice cream scoop of FIG. **8**;
FIG. **12** is a bottom end view of the ice cream scoop of FIG. **8**;
FIG. **13** is a top view of the ice cream scoop of FIG. **8**; and,
FIG. **14** is a bottom view of the ice cream scoop of FIG. **8**.

1 Claim, 6 Drawing Sheets



Claim 1 from Utility Patent 9,173,527

1. An ergonomically designed ice cream scoop, comprising:
- a handle;
- and a scoop head integrally attached to the handle
  - having an irregular bowl for receiving an ice cream therein
    - with a generally spade-shaped leading edge
      - integral with a portion of the bowl and
      - extending outwardly therefrom for scooping an ice cream out of a container,
- wherein the bowl is generally an oblong shaped scoop member attached at one end of the handle at an approximately 45 degree angle from a longitudinal axis running the length of the handle.

HOST & ENTERTAIN

SERVE

PREPARE

SFMOMA
SFMOMA
SFMOMA

gifts
heart
ALESSI

in stock

$60.00

Ice cream scoop Koki

KOKI VS05

Designer **Valerio Sommella**

Details

1

ADD TO CART

Shipping & refunds

Add to Wishlist

Belle-V

Share Tweet Share Pinterest Email

Silver | Kitchens | 2014

The Belle-V ice cream scoop is a solid aluminum scoop with a classic, ergonomic design that is made to last. The angled head works with the natural rolling action of a user's wrist to give maximum leverage to easily scoop the hardest ice cream. The spade-shaped edge helps users get into those hard-to-reach corners at the bottom of the ice cream container.

Designed by Jeff Salazar, IDSA, Karl Ulrich, Alan Cook, Gerard Furbershaw, Jeff Smith, Junggi Sung and Ken Wood of Belle-V

Contact: Naomi Kieser - naomi@lunar.com

COOPER HEWITT NATIONAL DESIGN AWARDS

LUNAR

LUNAR

City, California, United States

www.LUNAR.com

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STATUS
Winner

AWARD CATEGORY
Product Design

YEAR
2014

Belle-V Ice Cream Scoop

by LUNAR

124 1713

Engineering, Industrial Design, Prod...

Lendstar

by LUNAR

10 499

Interaction Design, Product Design, ...

NOVA

by LUNAR

72 1097

Interaction Design, Product Design, ...

Mobilegear.com

SF Prep

SWITCH

Jerry Greenfield of
Ben & Jerry's

What's the Scoop?

- No product category is so mature you can't innovate.
- No product is so simple that it doesn't present commercialization challenges.
- Conceptual insight + excellent industrial design = *wow* product.
  - Business discipline also important!
- Crowdfunding can be a nice way to launch a product.
- Great product does not ensure a great stand-alone business.