

TTI / Vanguard   Understanding Understanding Conference  
Pittsburgh   3 October 2012

# Understanding Relevance

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Dubberly Design Office

# Relevance

The right resources  
in the right amounts  
at the right time  
in the right place

=

# Identity

for a person  
or team

+

# Context

to accomplish  
the tasks at hand  
without disruption  
or loss of flow

# Understanding relevance is already a big business.

+You

Search

Images

Maps

Play

YouTube

News

Gmail

Drive

Calendar

More

Google

[is auto insurance required]

Search

About 106,000,000 results (0.19 seconds)

SafeSearch off

Web

Images

Maps

Videos

News

Shopping

More

San Francisco, CA

Change location

Show search tools

Ads related to [is auto insurance required]

Top 5+ Car Insurance(CA)

california.autoinsurancefinders.com/

Check Quotes on 5+ Insurers in CA Free Comparison. Rates in 2 Minutes

With 3 Quotes = You Have Choices

Full Coverage in CA

Others in California Saved 18%

Shiny New Policies Ahead

\$19 Car Insurance. New

1 (866) 693 8902

auto-insurance.quotelab.com/CA

California Drivers, Save 55-75%! California Driver's License Only

GEICO Auto Insurance - How Much Could You Save?

www.geico.com/

Get a Free Auto Insurance Quote!

2,550 people +1'd or follow GEICO Insurance

Mandatory Health Insurance Is Not Like Mandatory Auto Insurance ...

chronicle.com/.../mandatory...insurance...mandatory-auto-insurance/...

Sep 10, 2009 – I keep hearing comparisons between the proposal for mandatory health insurance coverage and the requirement that drivers maintain auto ...

Vehicle insurance - Wikipedia, the free encyclopedia

en.wikipedia.org/wiki/Vehicle\_insurance

Basic auto insurance is mandatory throughout Canada with each province's government determining which benefits are included as minimum required auto ...

Public policies - Coverage levels - Excess - Behavior-based insurance

State-by-State Minimum Car Insurance Requirements

personalinsure.about.com > ... > Car Insurance > Policy Basics

Here is a great state-by-state chart listing the minimum car insurance bodily injury and property damage liability limits. Also find out what the limits mean along ...

California Small Business Blog: Is Auto Insurance Required for You...

jonathangstein.typepad.com/california\_small.../is\_auto\_insuran.html

Is Auto Insurance Required for Your Small Business? The easy answer is no. You are not required to carry insurance to own a small business.

Vehicle Insurance Information and requirements

www.dmv.ca.gov/vr/insurance.htm

The Department of Motor Vehicles enhances traffic safety through the testing and monitoring of drivers; protects identity by ensuring the integrity of DMV's ...

Insurance Requirements for Vehicle Registration

www.dmv.ca.gov/pubs/brochures/fast\_facts/ffvr18.htm

Insurance companies in California are required by law (California Vehicle Code [CVC] §16058) to electronically report private-use vehicle insurance information ...

Auto insurance requirements - WisDOT

Ads

AAA Auto Insurance

www.aaa.com/

Rated A+ (Superior) by A.M. Best.

Call for a free quote 877-474-6688.

21st Century Insurance

www.21st.com/

Free Car Insurance Price Quote.

See If You Could Save Hundreds.

Auto Insurance Quote

www.travelers.com/

1 (866) 274 9386

Get A Free Fast Online Quote Now.

See How Much You Can Save!

\$15 Auto Insurance?

www.freewayinsurance.com/

Auto Insurance As Low As \$15/month.

Tickets & Accidents - Cheap Rates!

Group Auto Insurance

www.metlife.com/

1 (855) 380 2435

Looking For Group Auto Insurance?

Visit The Official MetLife Site!

Progressive® Insurance

www.progressive.com/

Named #1 Auto Insurance Website.

Get An Auto Insurance Quote Today!

2,354 people +1'd or follow Progressive Insurance

\$15 Cheap Auto Insurance?

www.costulesins.com/

Cheapest Car Insurance.

Get an instant insurance quote.

AIS Car Insurance

www.aisinsurance.com/Car-Insurance

1 (877) 639 2589

Last Year AIS Customers Saved \$600!

New 2012 Discounts. Free Quotes.

See your ad here »

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A successful bid  
for the search term  
“is auto  
insurance required”  
through  
Google Adwords  
can cost  
\$143 per click —  
that’s 1 click.

Google AdWords

HomeCampaignsOpportunitiesTools and Analysis▼BillingMy account▼

Tools

Keyword Tool

Traffic Estimator

Placement Tool

Contextual Targeting Tool

▼ Include terms (0) ?

▼ Exclude terms (0) ?

▼ Match Types ?

☒ Broad

☒ [Exact]

☒ "Phrase"

Help

Why should I use the Keyword Tool?

How do I use the Keyword Tool?

What's the difference between the Ad Group Ideas tab and Keyword Ideas tab?

How can I refine my ideas?

What should I know about my statistics?

Help Center

Search help center

Go

Saved ideas (0)

My keyword ideas

My ad group ideas

Find keywords

Based on one or more of the following:

Word or phrase

is auto insurance required

Website

www.google.com/page.html

Category

Apparel

☐ Only show ideas closely related to my search terms ?

☒ Advanced Options and Filters

Locations: United States ✕

Languages: All

Devices: Desktops and laptops

Search

Keyword Ideas

Ad group ideas (Beta)

About this data ?

Sorted by Approximate CPC (Search) ▼

Columns ▼

1 - 3 of 3

▼ Save all

Search terms (3)

Keyword	Competition	Global Monthly Searches ?	Local Monthly Searches ?	Approximate CPC (Search) ?
<input type="checkbox"/> [is auto insurance required] ▼	High	22	22	\$143.06
<input type="checkbox"/> "is auto insurance required" ▼	High	170	170	\$57.53
<input type="checkbox"/> is auto insurance required ▼	High	4,400	2,900	\$42.21

▼ Save all

Keyword ideas (800)

Keyword	Competition	Global Monthly Searches ?	Local Monthly Searches ?	Approximate CPC (Search) ?
<input type="checkbox"/> [is auto insurance required] ▼	High	22	22	\$143.06
<input type="checkbox"/> [coverage auto insurance] ▼	High	16	12	\$141.14
<input type="checkbox"/> "ohio auto insurance requirements" ▼	High	22	22	\$123.26
<input type="checkbox"/> [ohio auto insurance requirements] ▼	High	22	22	\$123.26
<input type="checkbox"/> [auto insurance mandatory] ▼	High	16	12	\$104.44
<input type="checkbox"/> "auto insurance quote rate" ▼	High	480	320	\$100.36
<input type="checkbox"/> [auto insurance quote rate] ▼	High	480	320	\$100.36
<input type="checkbox"/> [auto insurance plano texas] ▼	Medium	36	36	\$98.44
<input type="checkbox"/> [requirements for auto insurance] ▼	High	12	< 10	\$97.93
<input type="checkbox"/> [online auto insurance rates] ▼	High	110	91	\$97.71
<input type="checkbox"/> "utah auto insurance quotes" ▼	High	28	28	\$96.59
<input type="checkbox"/> [utah auto insurance quotes] ▼	High	28	28	\$96.59
<input type="checkbox"/> [suggested auto insurance coverage] ▼	High	16	16	\$95.93
<input type="checkbox"/> "suggested auto insurance coverage" ▼	High	28	22	\$95.93
<input type="checkbox"/> [auto insurance with mandatory auto insurance]	High	16	16	\$95.79

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**Our models of relevance are still pretty crude**  
even at the leaders – Amazon, Facebook, and Google.





# Understanding relevance promises a new era of CRM.

(customer relationship management)

Relevance transforms advertising from interruption to something more like assistance.

**Fading**

**Today's standard**

**Emerging**

Mass

Personalized

Conversation

Sift through  
broadcast streams

Search the web  
for things you want

Interesting things  
find you

# Understanding relevance promises a new era of UX.

(user experience)

Relevance expands UX from simple interaction to something more like conversation.

## Fading

Command line

Remember + type

## Today's standard

Direct manipulation

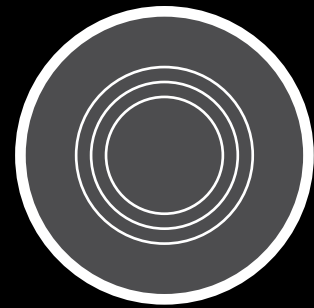
See + point

## Emerging

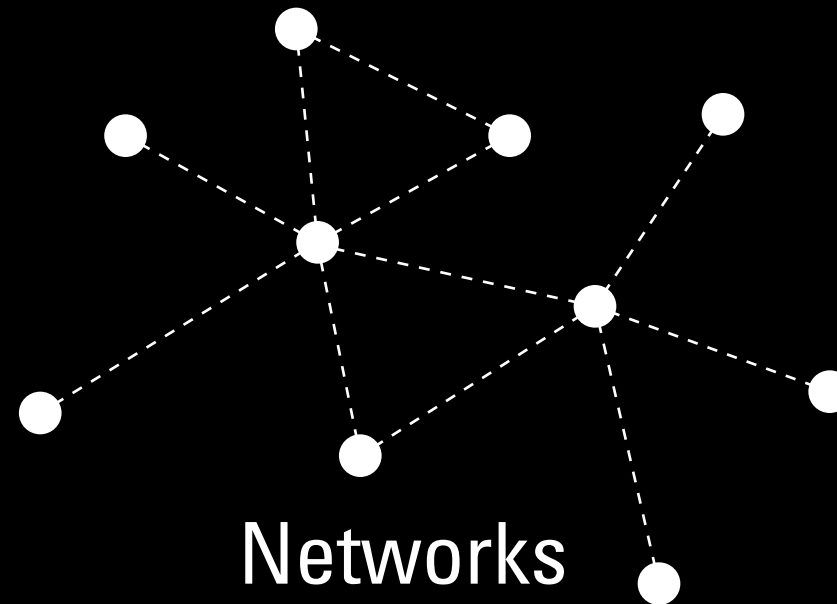
Delegate to agents

Ask + tell

# Better understanding of relevance is coming from several simultaneous revolutions.



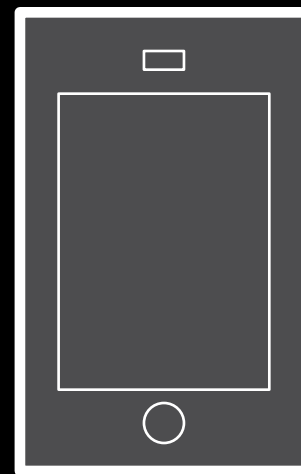
Sensors



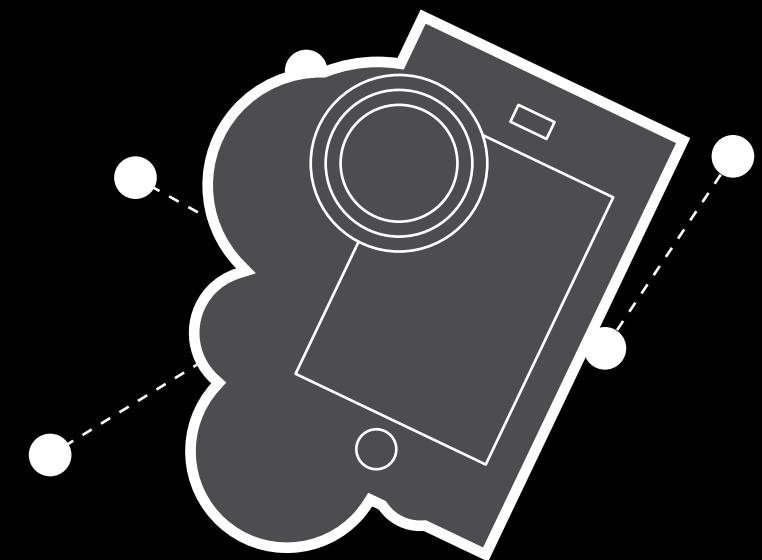
Networks



Cloud-based Computing



Mobile Computers

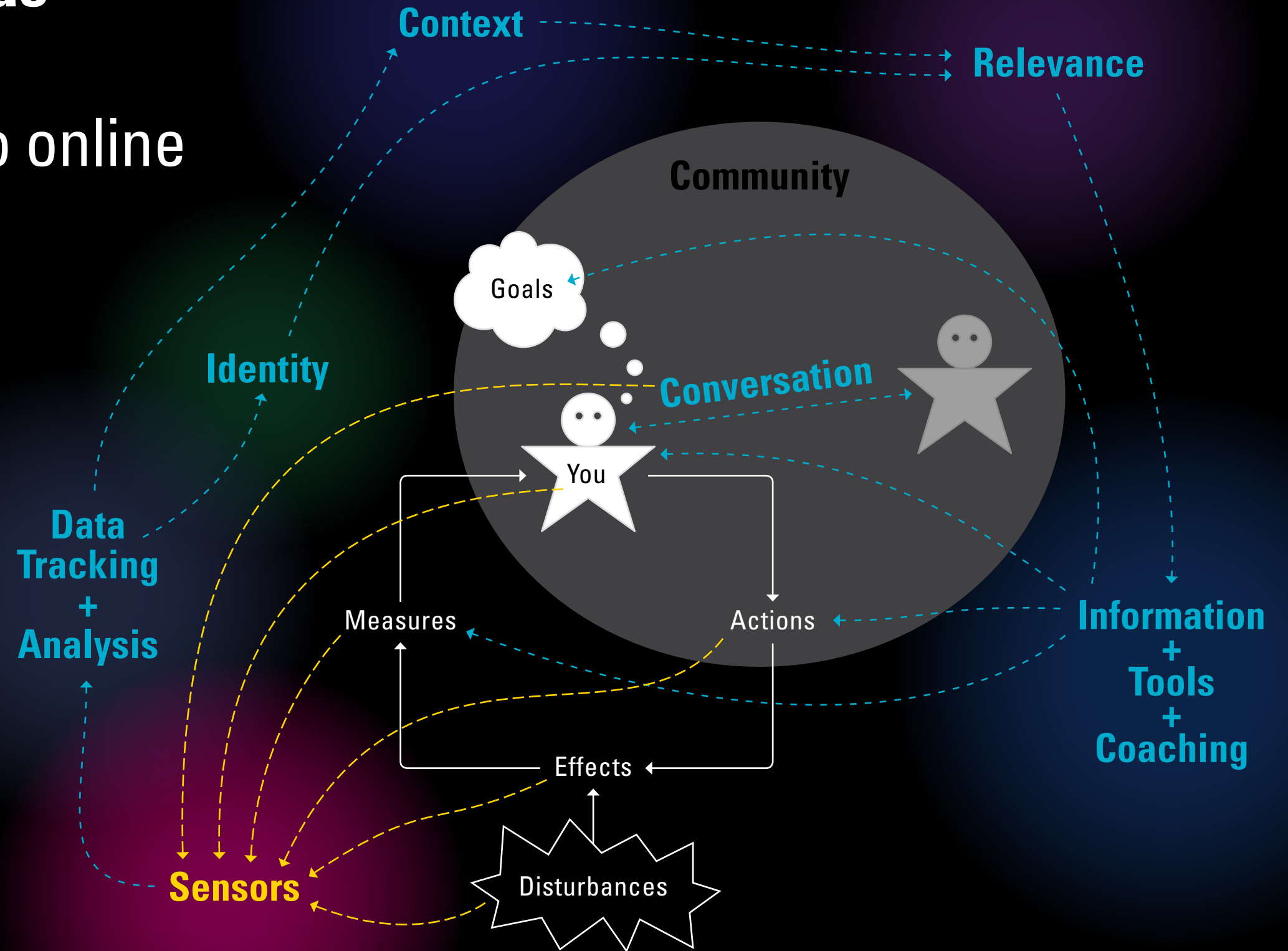


Combinatorial Innovation

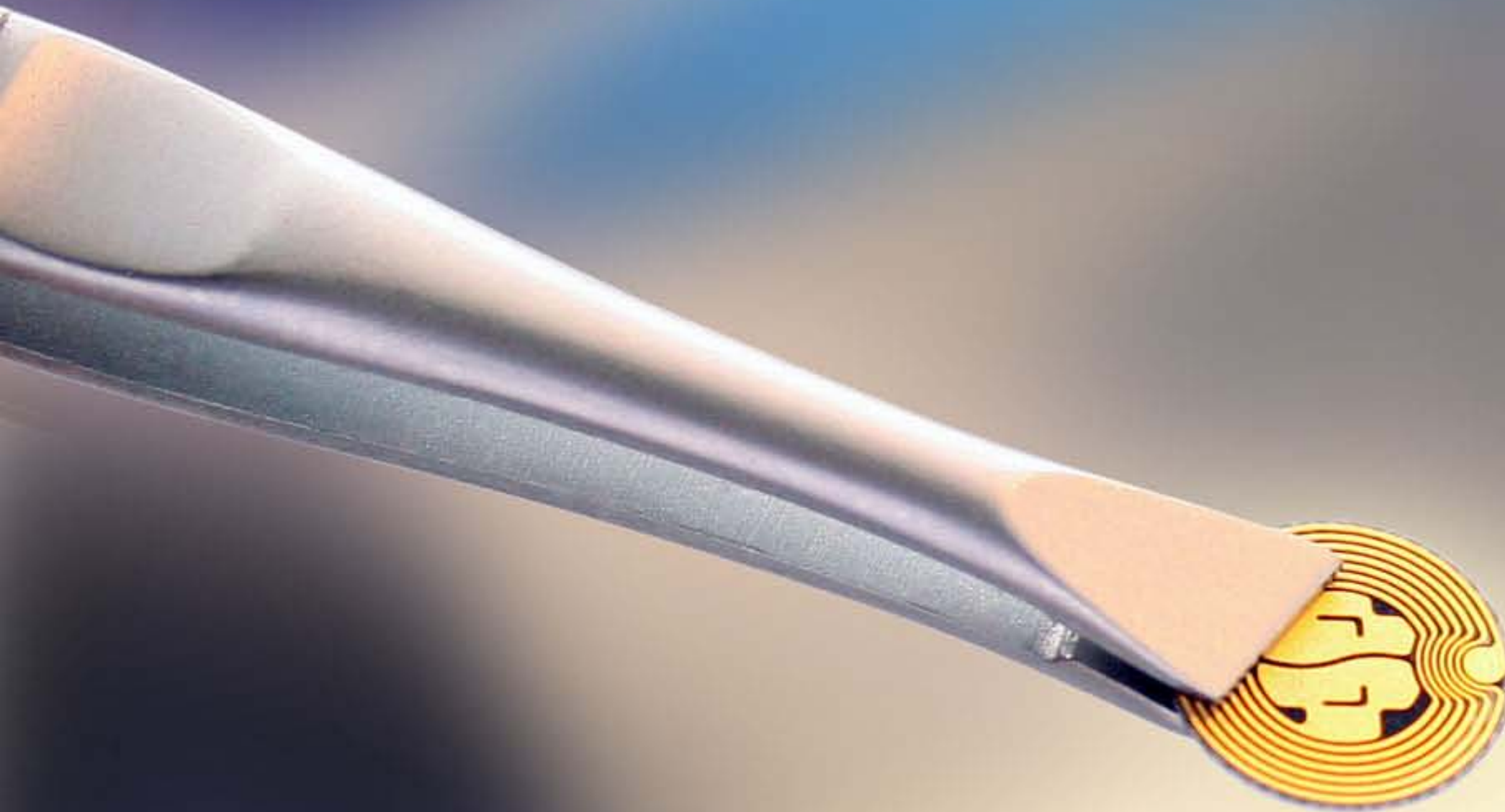


# Sensors will be ubiquitous

- at checkpoints
- logging everything you do online
- all around you
- on you
- in you



**Sensors are being printed – like micro-processor chips;**  
quantities are increasing; prices are dropping.





# Sensors are connecting – forming mesh networks.

Each vine has a sensor; each sensor talks to the next;  
hubs connect to the internet, providing a heat and humidity map.





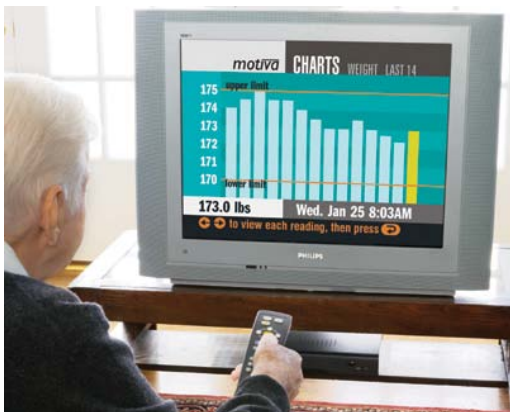
**The same story is playing out in healthcare;**  
with many companies offering home network hubs,  
connecting medical diagnostic devices to the internet.



Alere  
DLM212



Philips  
Telestation



Philips  
Motiva (displayed through TV)



Intel  
Health Guide PHS6000



Care Innovations  
Guide Tablet



Care Innovations  
Connect



Care Innovations  
QuietCare sensors and data communicator



GrandCare Systems  
Grandcare Interactive

# Healthcare hubs are one of many types of home network hubs;

for now the market is expanding, but standards are emerging, and network effects mean consolidation is inevitable.

## Security



**ADT**  
Pulse Home Security

## Media



**Logitech**  
Harmony 1100 Advanced Universal Remote

## Appliance/Energy



**GE**  
Nucleus Energy Manager

## Routers



**Apple**  
Airport Extreme



**GE**  
FrontPoint Security Touchscreen



**Control4**  
7" In-Wall Touch Screen with Camera



**Nest**  
The Learning Thermostat



**Cisco**  
Linksys EA4500



**Expanding networks deliver rapidly growing data streams for processing by massive cloud-based computer systems which deliver the results almost anywhere.**



Sensors



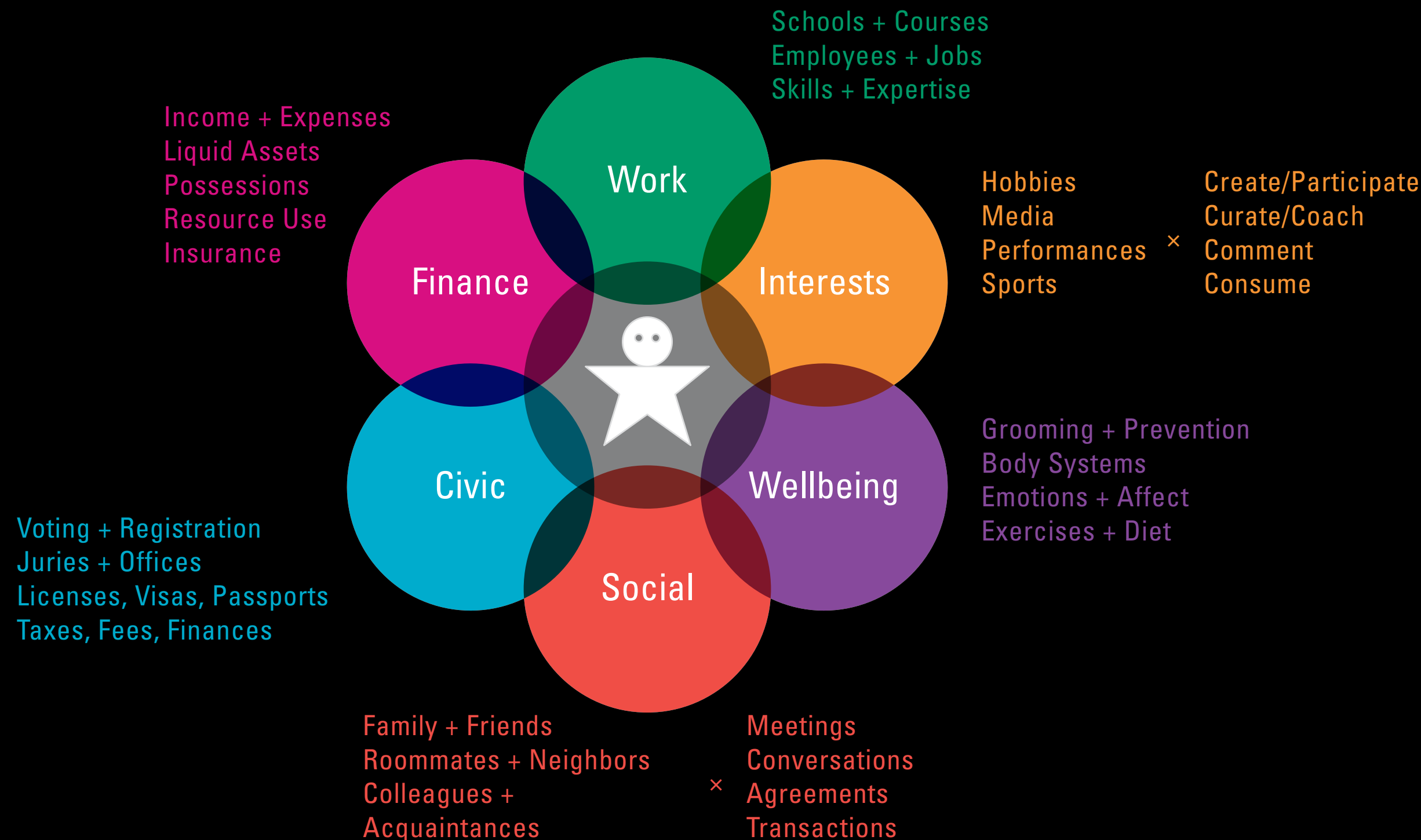
Cloud-based Computing



Mobile Devices



# What does this mean? Massive data collecting — organized into a taxonomy of personal identity





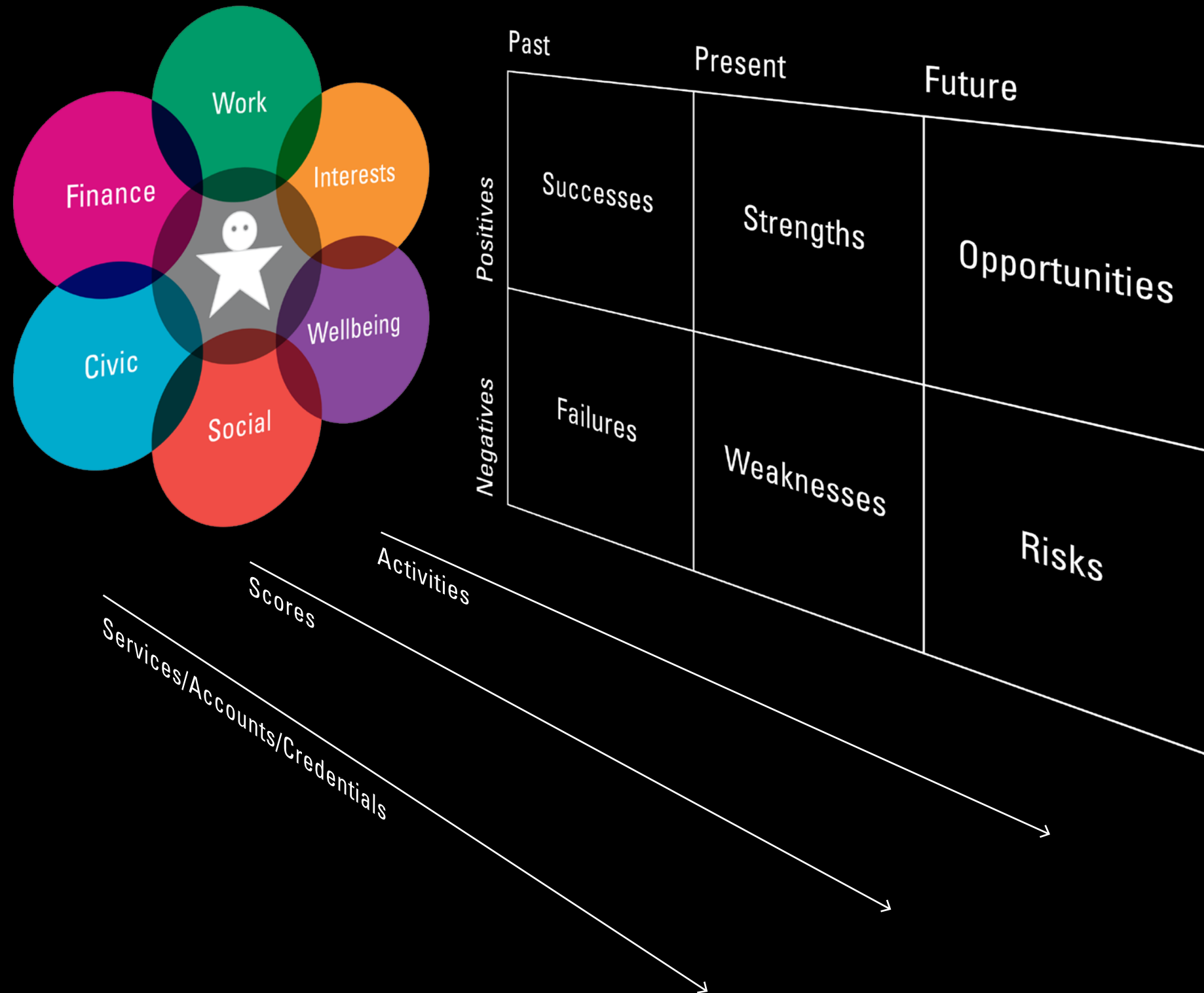
Drilling into a sub-categories shows the potential for detail; today lab tests can measure over 150 analytes; more are in development.



- Grooming + Prevention
- Body Systems
- Emotions + Affect
- Exercises + Diet

	(hydrocortisone)	Normal, PM: 3–17 µg/dL
17	Hydroxyprogesterone	Man, normal: .06–3 mg/L
*	See also: ovaries	Woman (follicular phase), normal: .2–1 mg/L
	Angiotensin-converting enzyme (ACE)	Normal: 23–57 U/L
Pituitary gland	Growth hormone	At peak: 5–45 ng/mL Between peaks: < 5 ng/mL
	Follicle-stimulating hormone (FSH)	Prepubertal: < 1 – 3 IU/L Adult male: 1–8 IU/L Adult female (follicular & luteal phase): 1–11 IU/L Adult female (ovulation): 6–26 IU/L Post-menopausal female: 30–118 IU/L
	Adrenocorticotrophic hormone (ACTH)	Normal: 20–80 pg/mL
	Prolactin	Female, normal: < 20 ng/mL Male, normal: < 15 ng/mL
	Blood Glucose	Hypoglycemia: < 3 mmol/l Normal: 3.6–5.8 mmol/l Normal, post-meal: <10 mmol/l Hyperglycemia: > 7 mmol/l (chronicly)
	Luteinizing hormone (LH)	Female (peak): 20–75 IU/L emale (post-menopausal): 15–60 IU/L
	Insulin absorption	-
	Plasma osmolality	Normal: 275–295 mOsm/kg
Blood: lipids	Total cholesterol	Desirable: < 200

# Identity changes over time.



# Activities take place within contexts.

## Physical Contexts

- Who (actors)
- What (resources)
- Where (location)
- When (time)

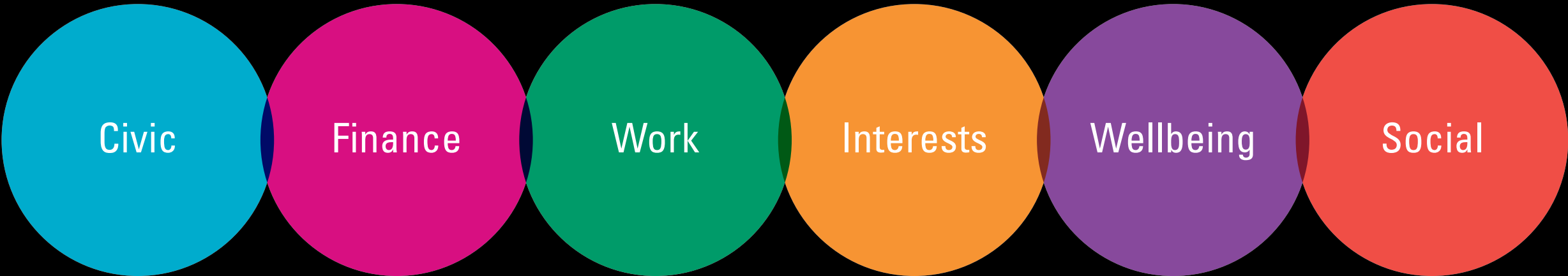
Why  
How



## Cultural Contexts (task domains)

- Languages (vocabulary)
- Concepts (knowledge)
- Methods (skills)
- Rules (norms)

# The space of possible services is sparsely populated.



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## Goals/Tasks/Queues

- Opportunities
- Risks

Kickstarter

Motif

Netflix Queue  
Amazon Wish List  
Air BNB

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## Status / Alerts

- Strengths
- Weaknesses

Online Wallets  
Square

Facebook

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## Records

- Successes
- Failures

Mint

Linkedin Resume

Evernote  
Amazon Purchases

EMR/PHR

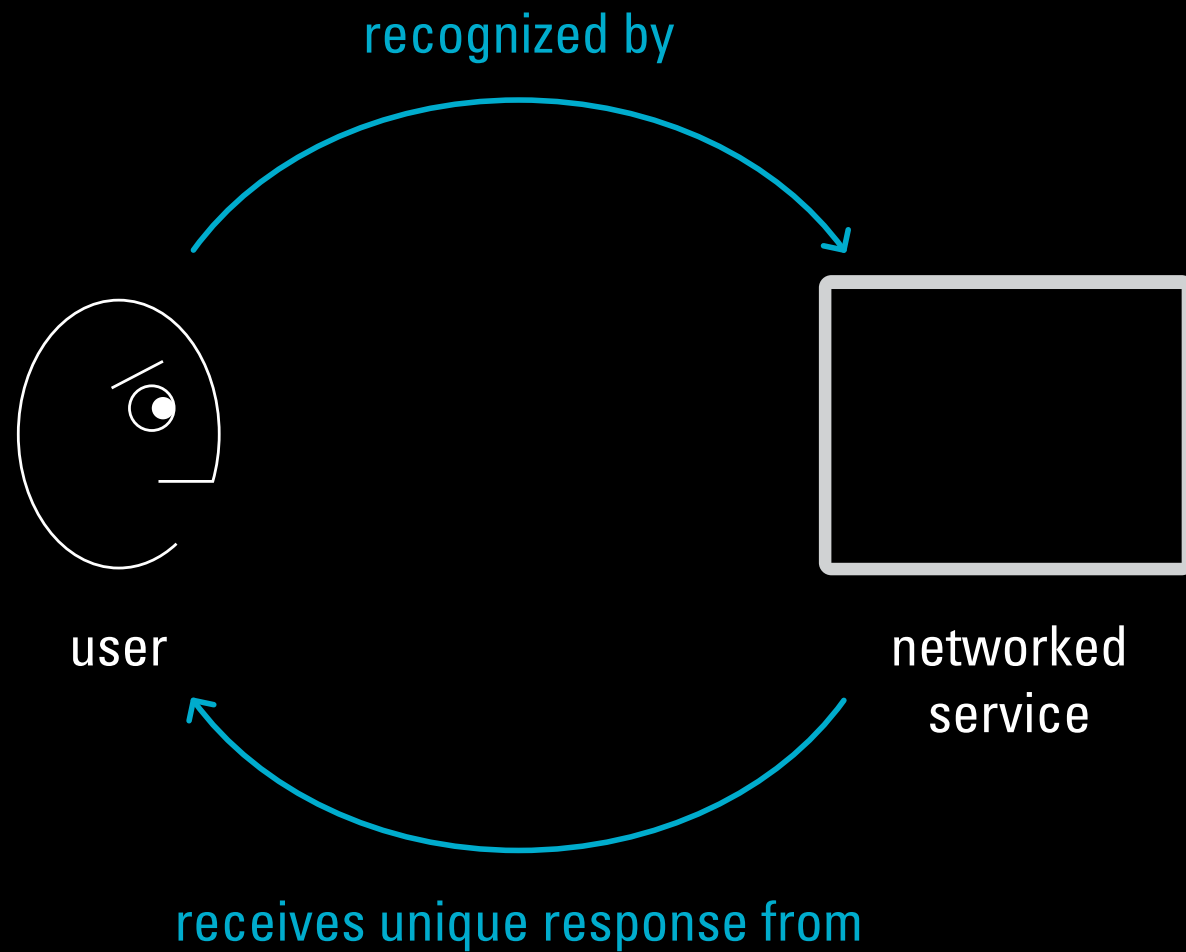
**Doc Searls predicts a new order in which you control your data;  
CRM gives way to VRM and you control your vendor relationships.**

*“In the not-too-distant future, you will be able, for example,  
to change your contact information with many vendors at once,  
rather than many times, over and over, at many different websites.  
You will declare your own policies, preferences and terms  
of engagement—and do it in ways that can be automated  
both for you and the companies you engage.”*

—“The Customer As A God,” WSJ, July 21, 2012

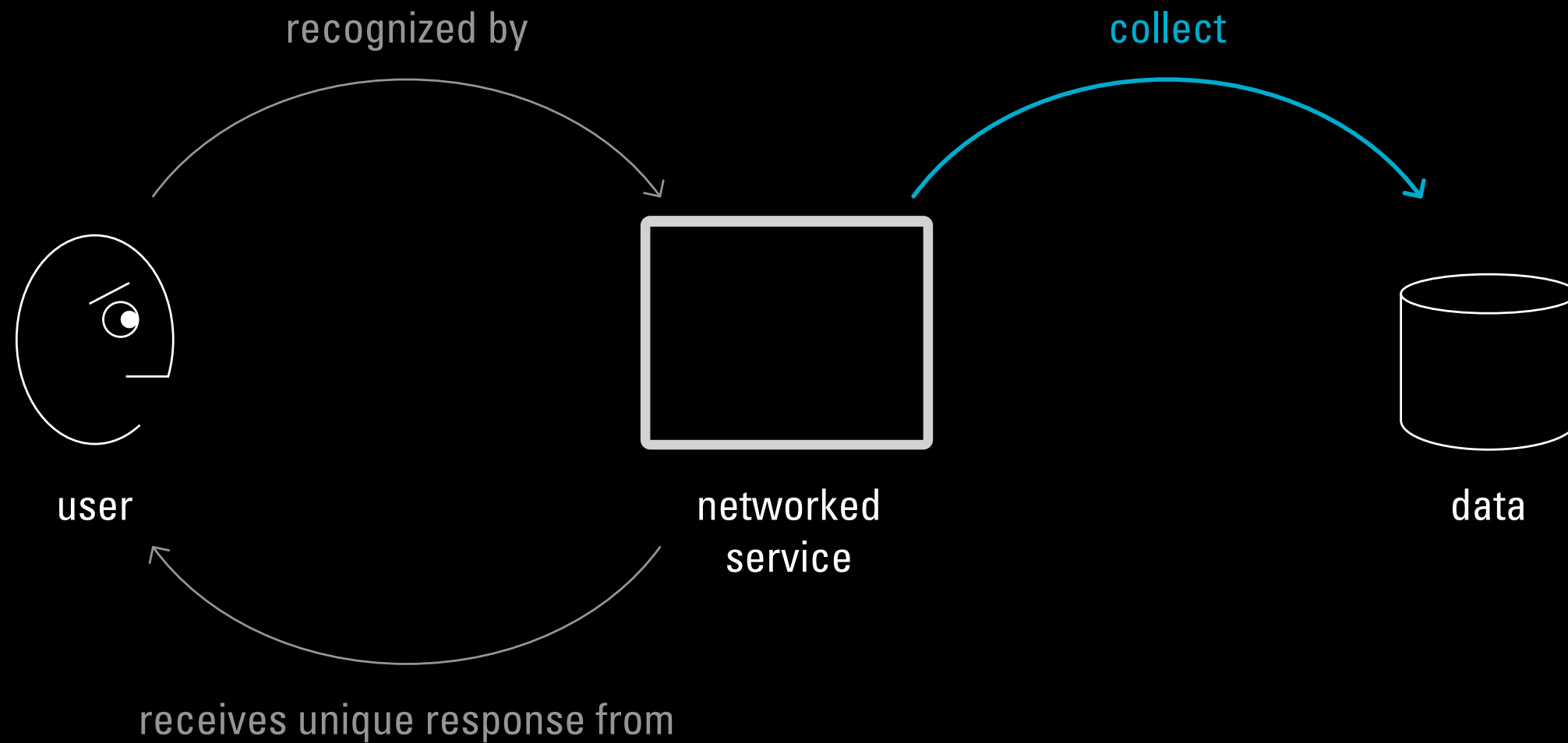
# That's the emerging future, but where are we today?

# Networked services can recognize their users and respond uniquely.

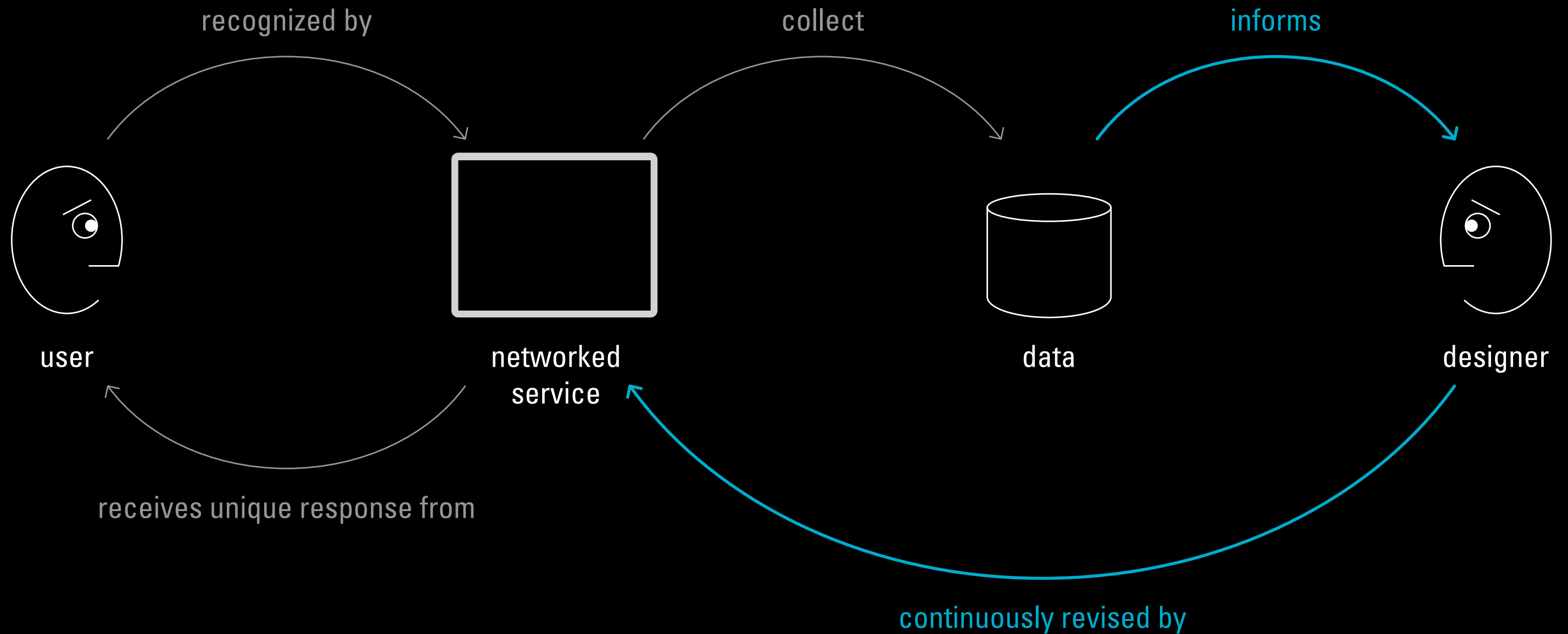




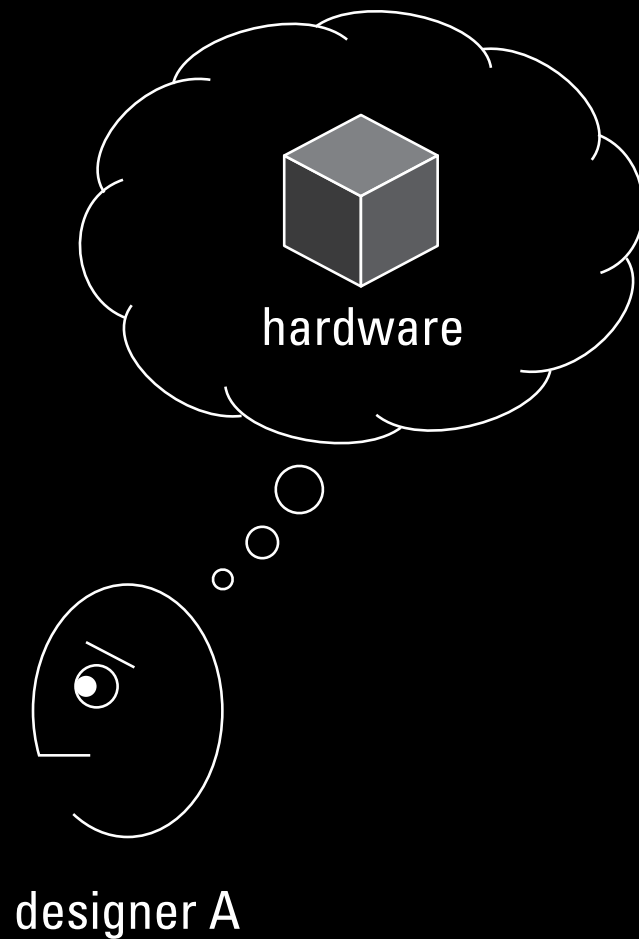
**Networked services collect information as a natural part of operating.**



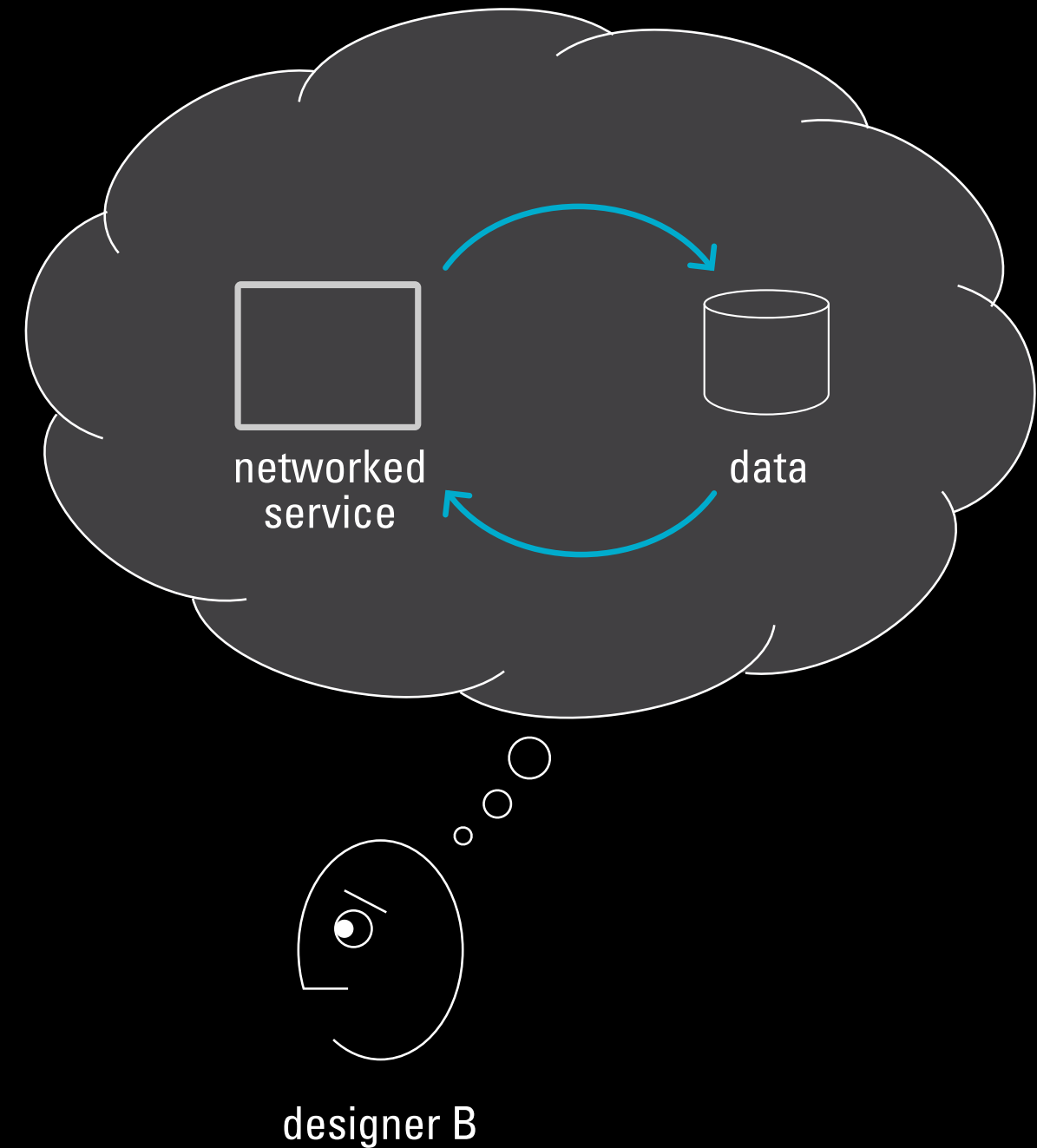
# Networked services **change continuously**.



**“... designing networked services  
requires a new way of thinking  
about a product  
and its development.”  
—Tim Misner**



vs

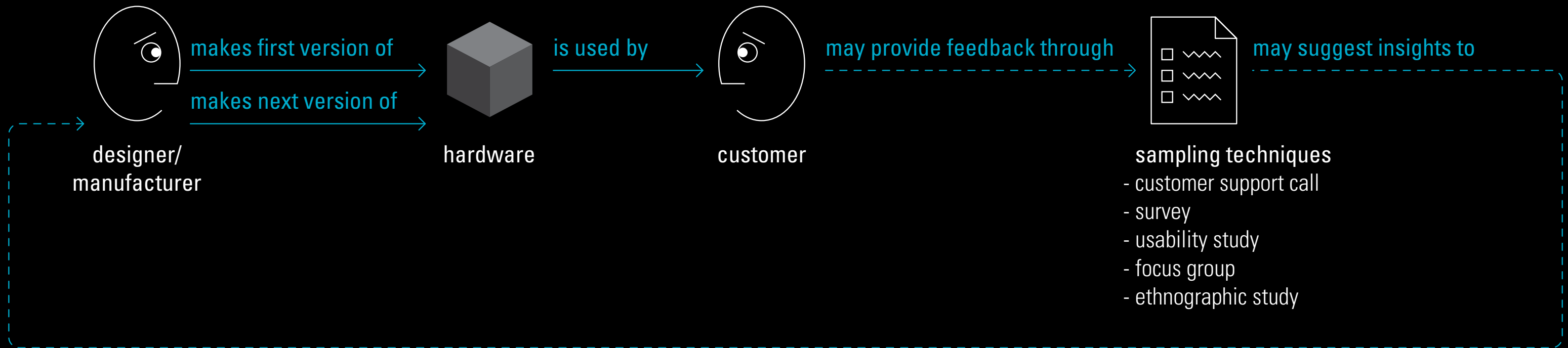


**“...internal discussion changes**

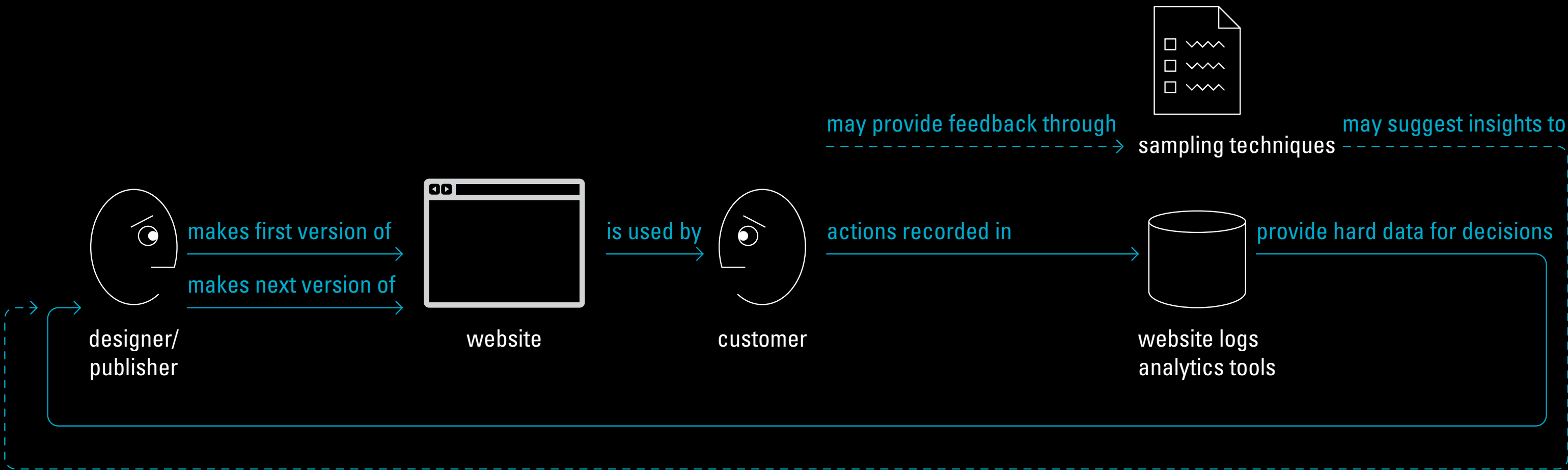
**from ‘what features or quality level  
do we think our products need?’**

**to ‘what data can we collect  
about our features and quality?’”**

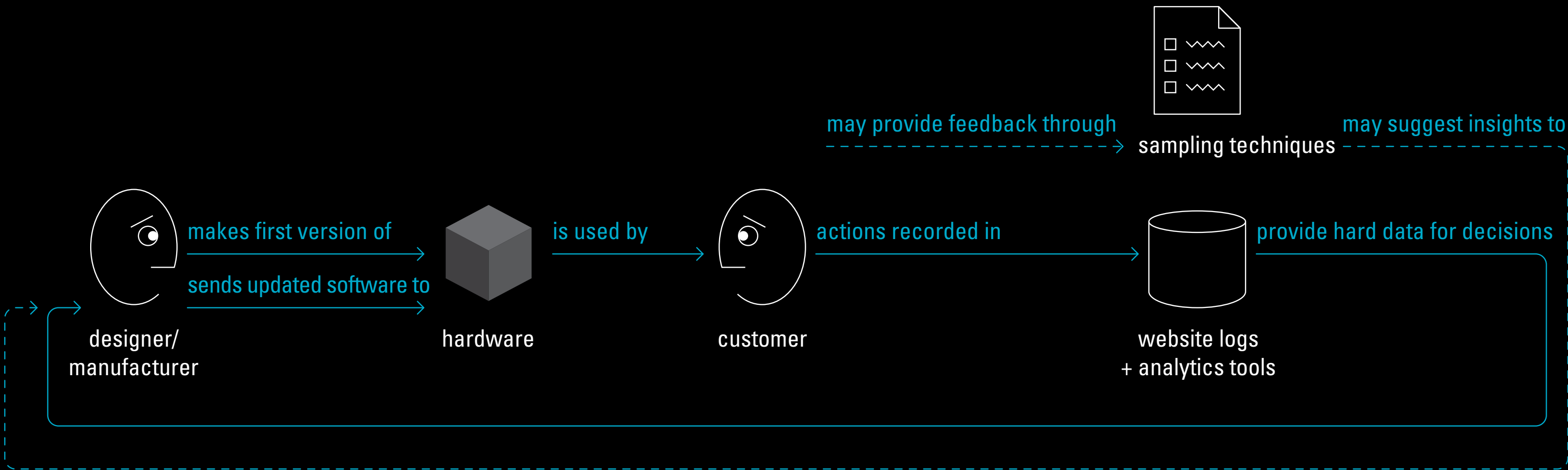
With traditional **hardware products**, designers have **limited knowledge** of customer use patterns.



With **web-based services**, designers can have **almost complete knowledge** of customers behavior.



As **hardware products**  
become part of networked services,  
they become **more like web sites**.



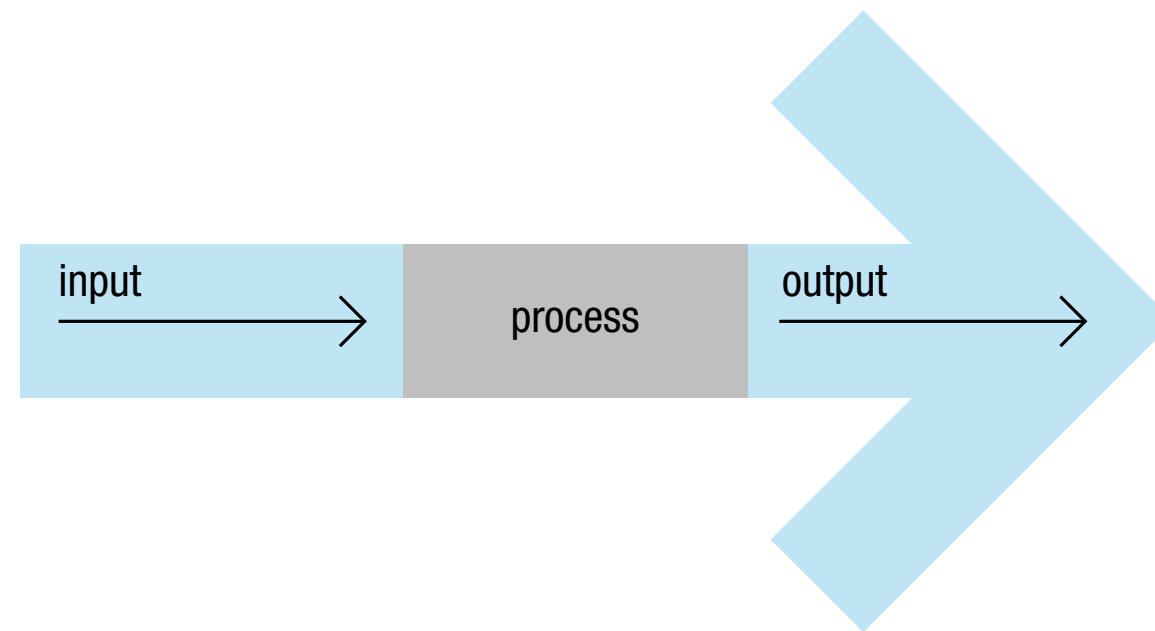


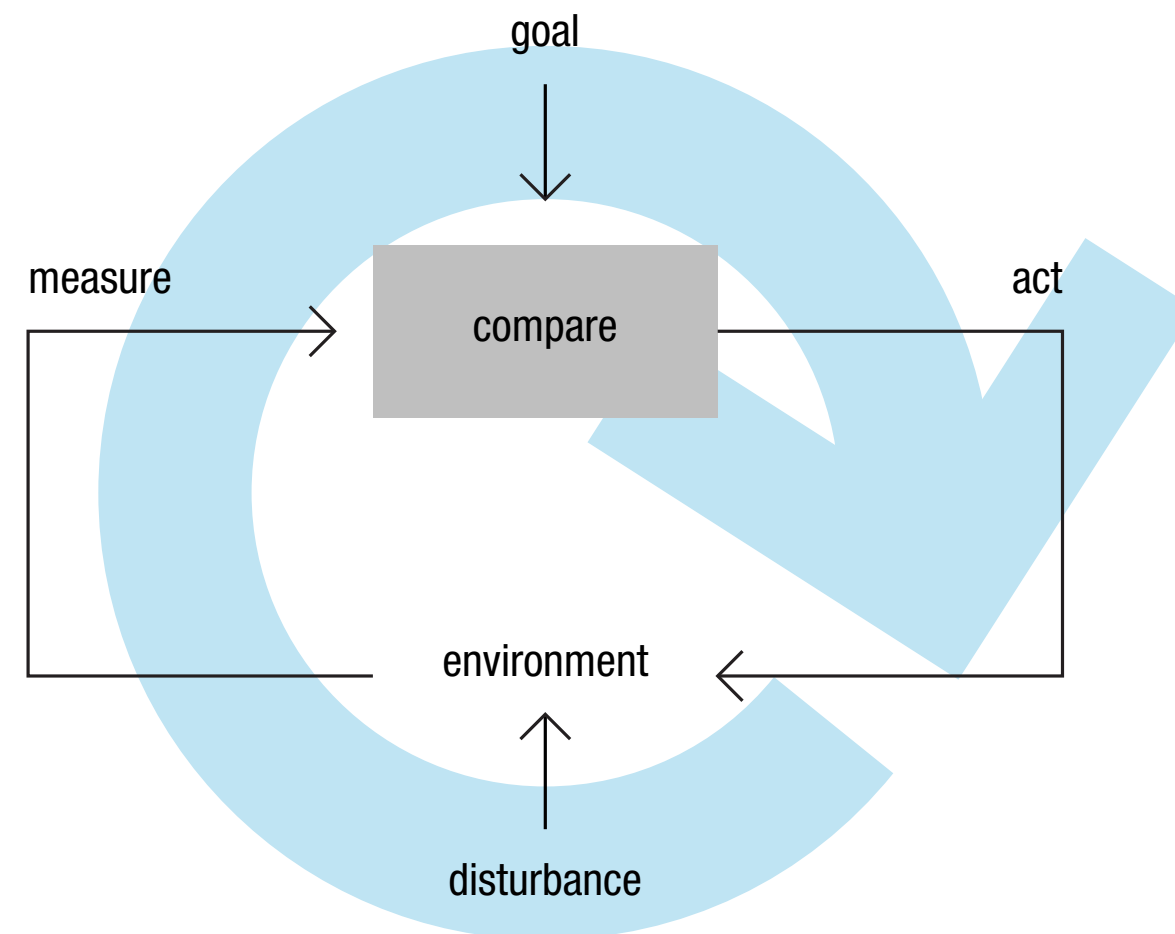
**Special thanks to**  
**Paul Pangaro**  
**Michael Liebhold**  
**Michael Gallagher**

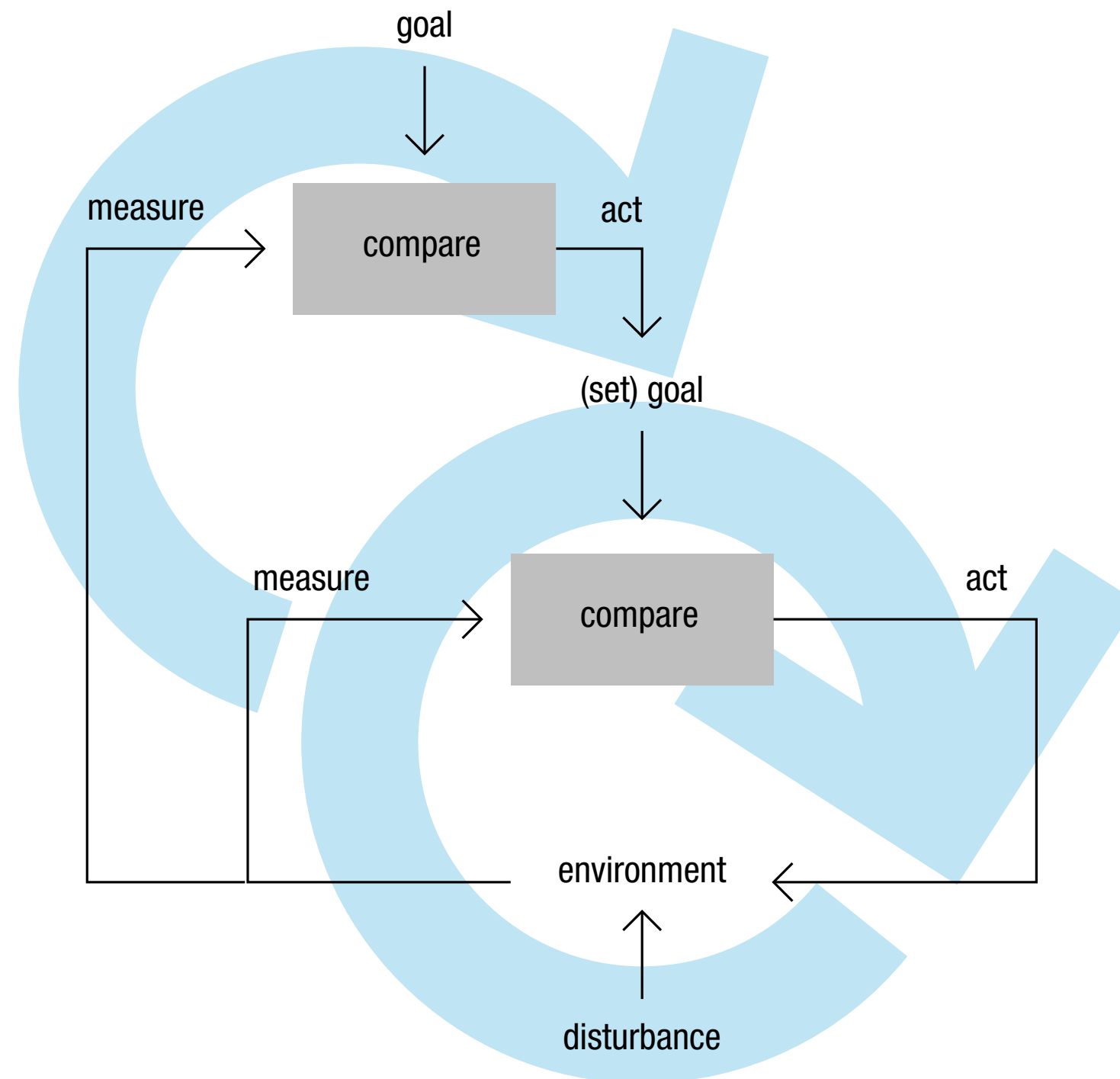
[hugh@dubberly.com](mailto:hugh@dubberly.com)

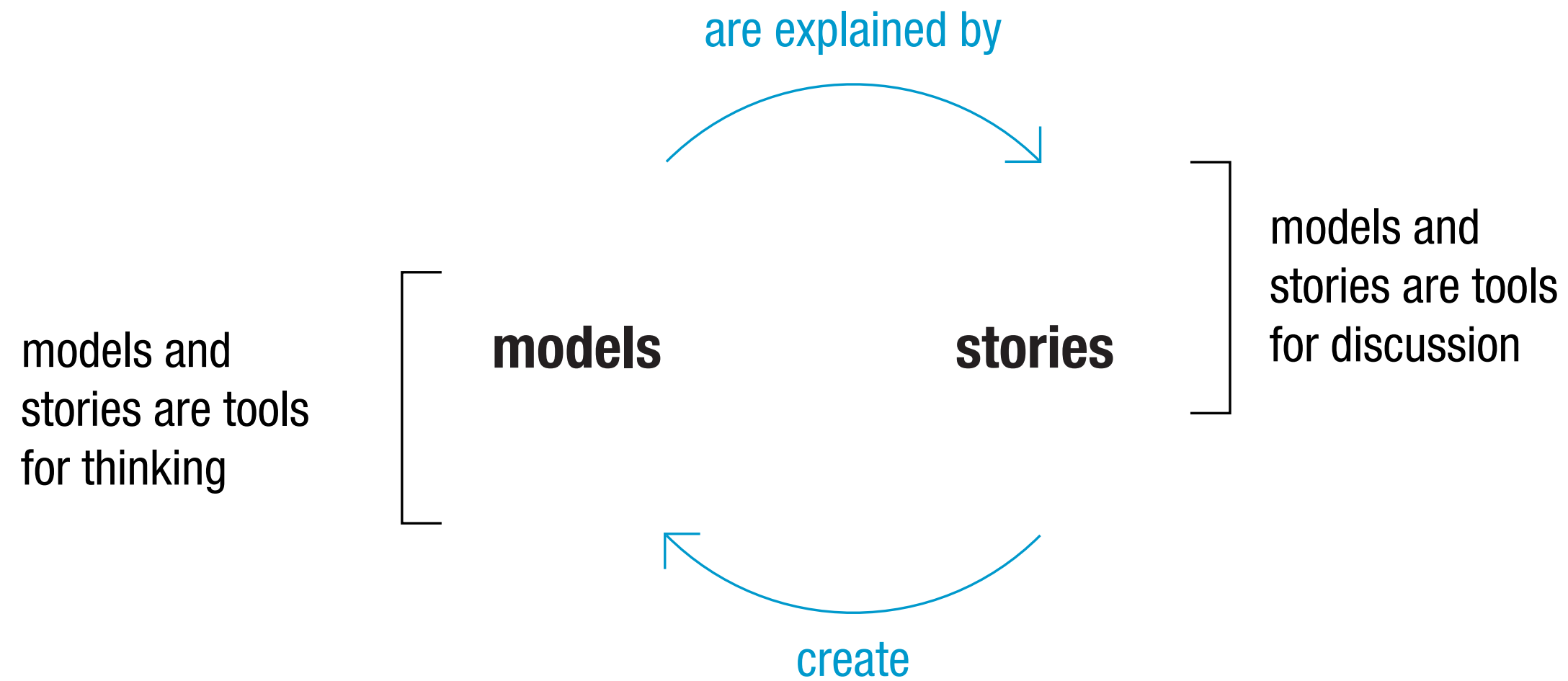
Presentation posted at  
[www.dubberly.com/presentations/Understanding\\_Relevance.pdf](http://www.dubberly.com/presentations/Understanding_Relevance.pdf)

# Appendix

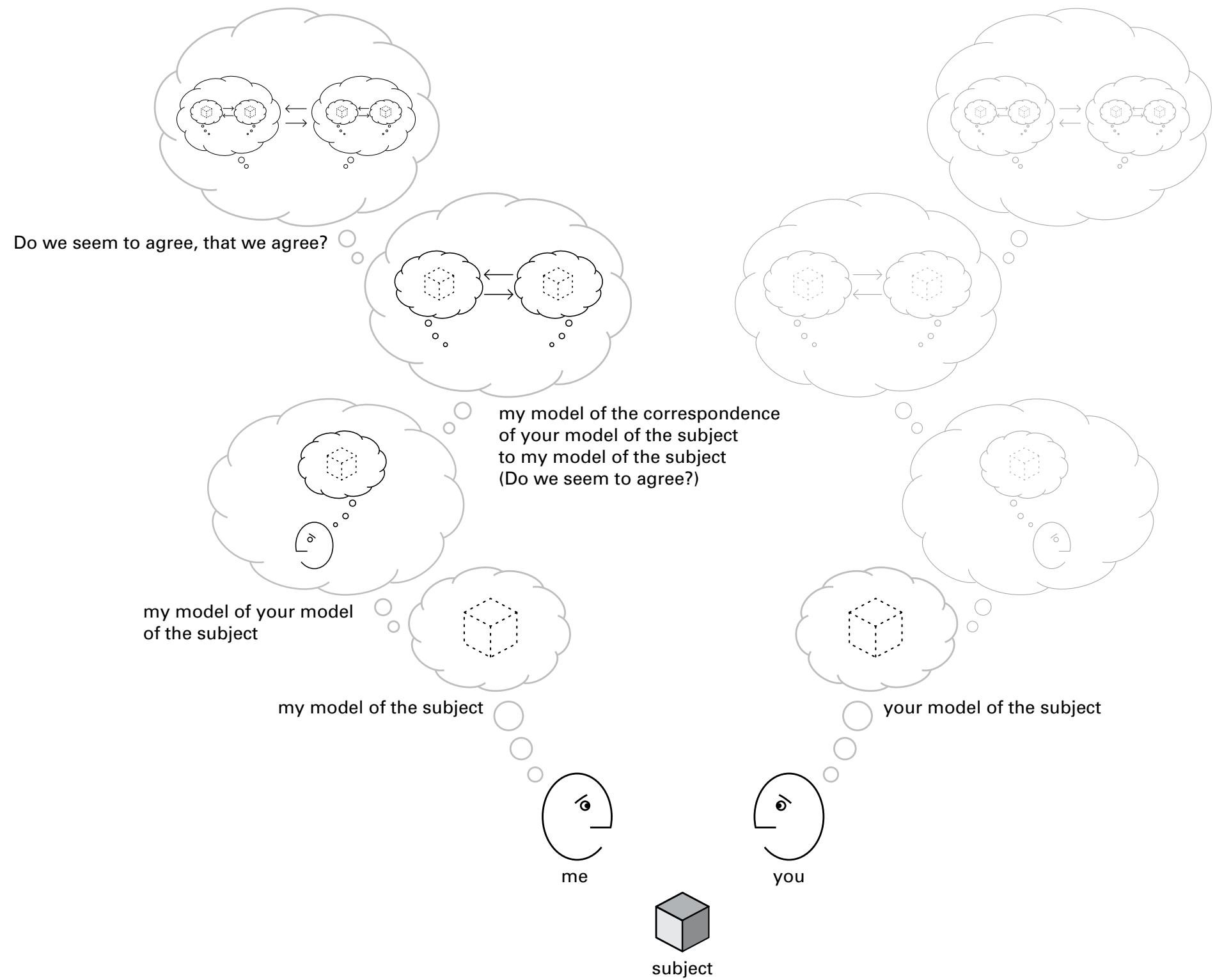






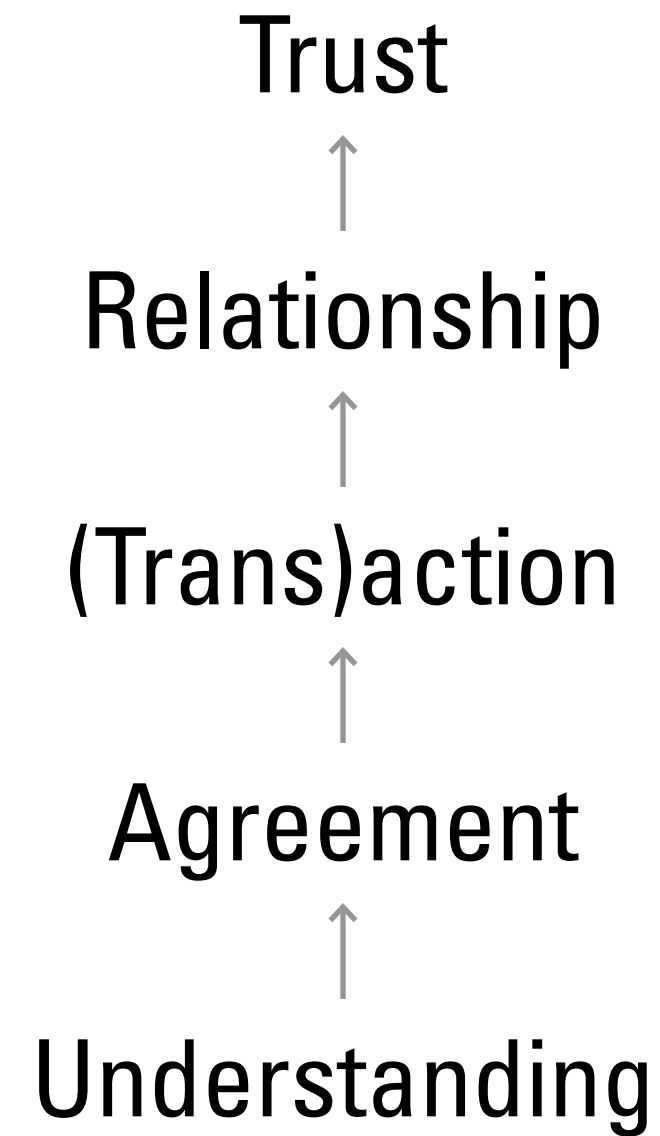


# Human communication relies on agreement.



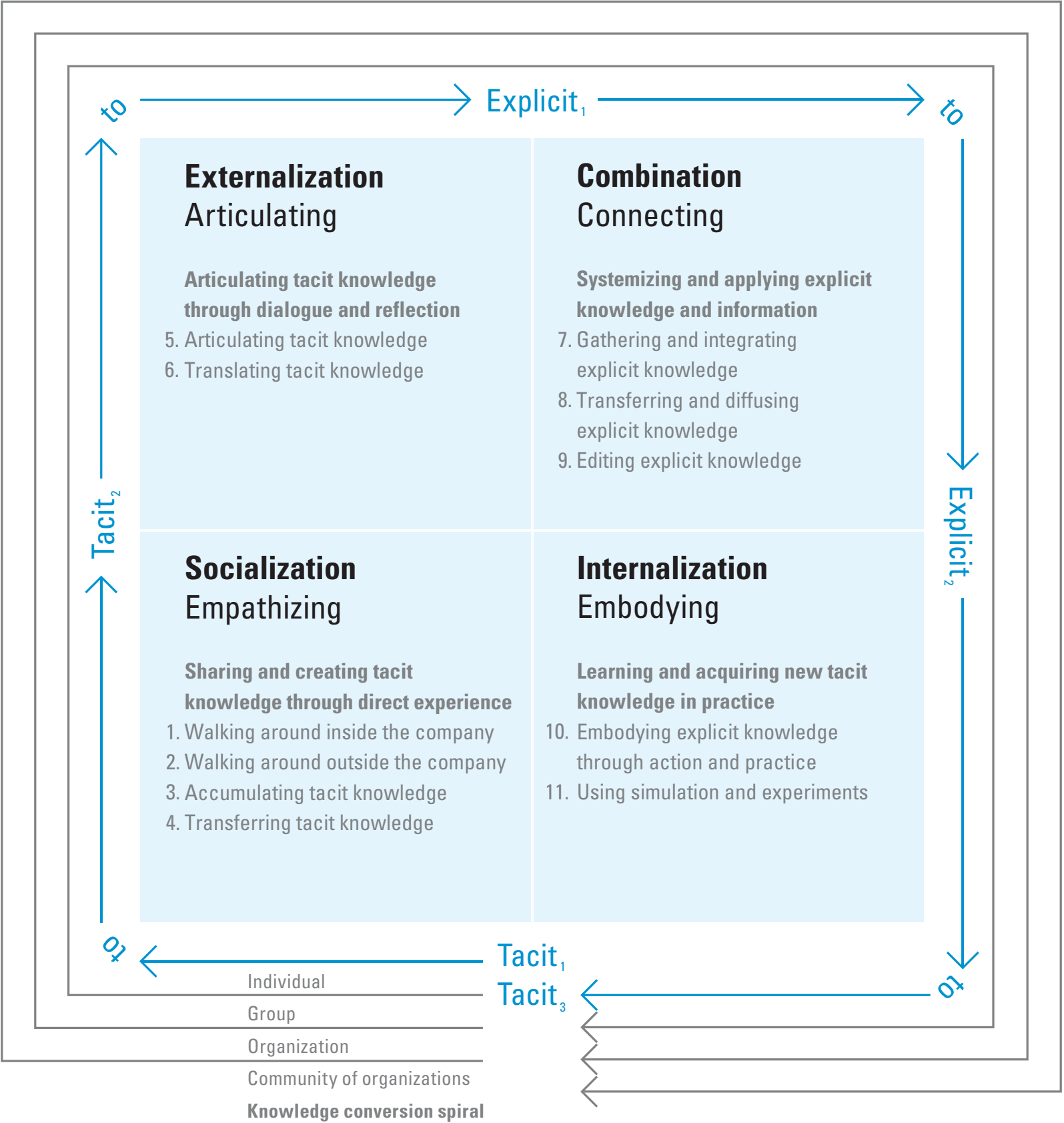


# Conversations may lead to trust.

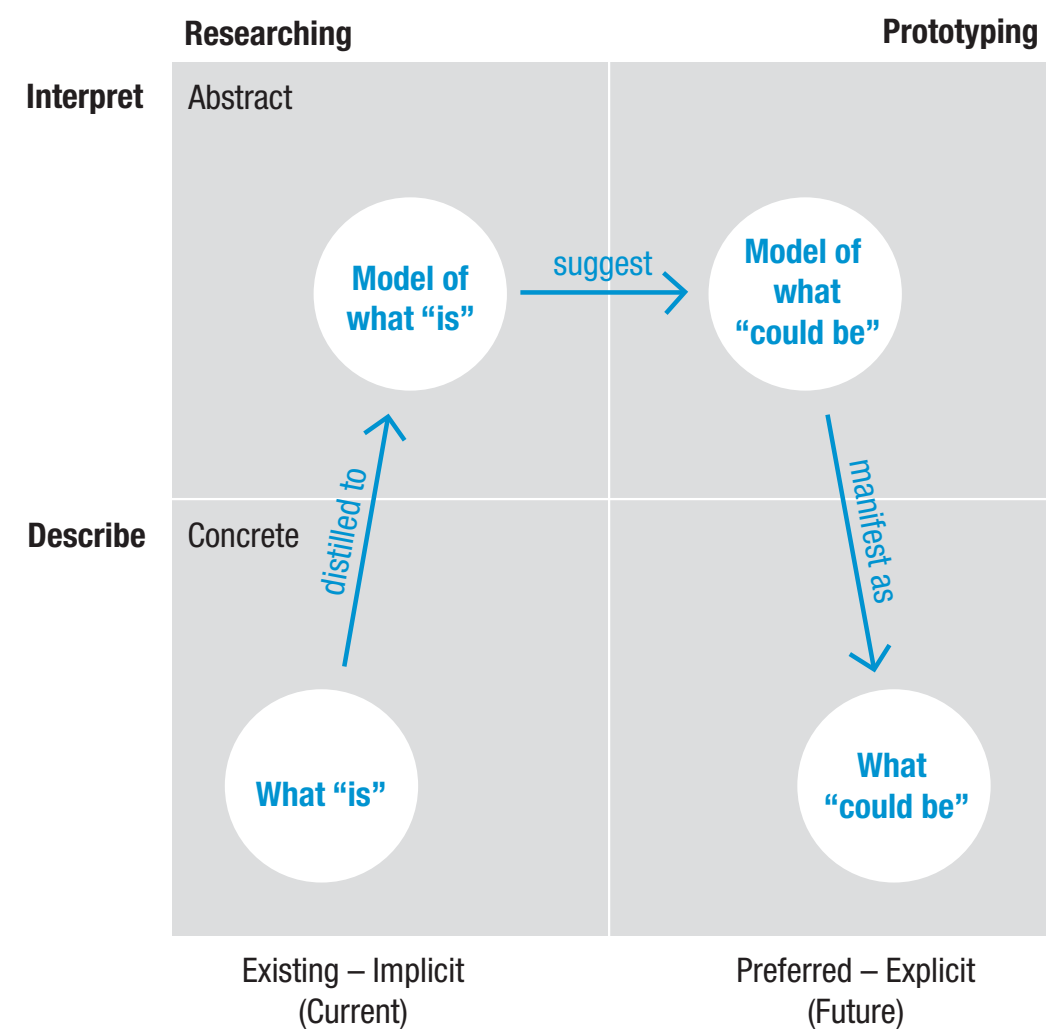


# This model describes the learning process.

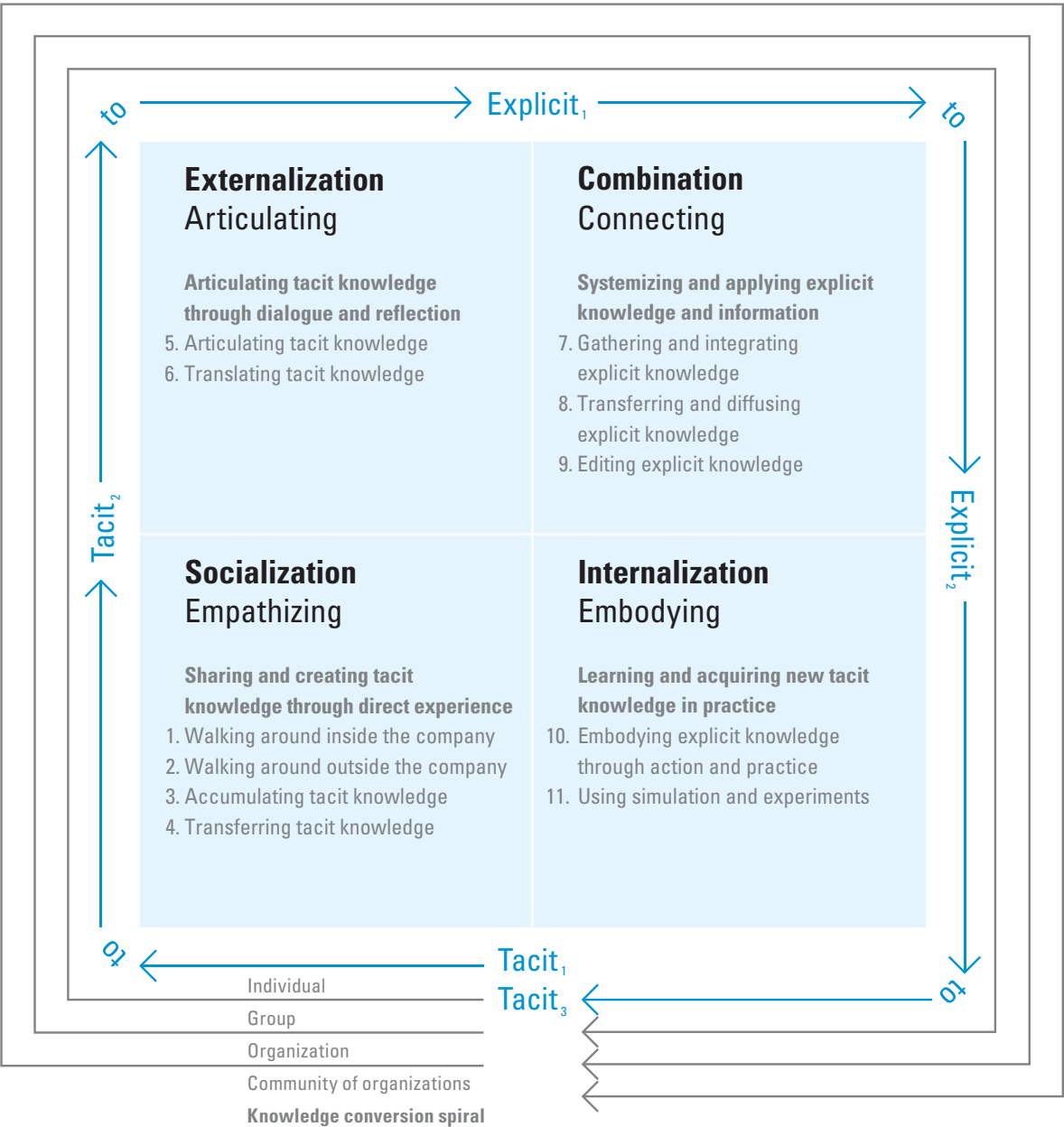
SECI Model of Knowledge Creation  
Ikujiro Nonaka (1995)



# Designing is analogous to learning.



Analysis-Synthesis Bridge Model  
Dubberly, Evenson & Robison (2008)



SECI Model of Knowledge Creation  
Ikujiro Nonaka (1995)