

Microsoft® Research

Faculty Summit 2010

Design Mind + Engineering Mind Secrets to Designing Compelling Product Experiences

Surya Vanka
Principal User Experience Manager
Microsoft Corporation



Handwritten text in a cursive script, likely a historical or religious manuscript. The text is written in a dark ink and is arranged in several lines, some of which are partially obscured by the drawing above. The script is dense and difficult to decipher, but it appears to be a form of early modern or medieval handwriting.



designer shoes

designer jeans

design thinking

designer toilet

designer babies

designer kitchens

leadership by design

designer dogs

designer homes

designer soda

the age of design

designer ceo

design dreams

designer glasses

designer lamps

designer

designer genes

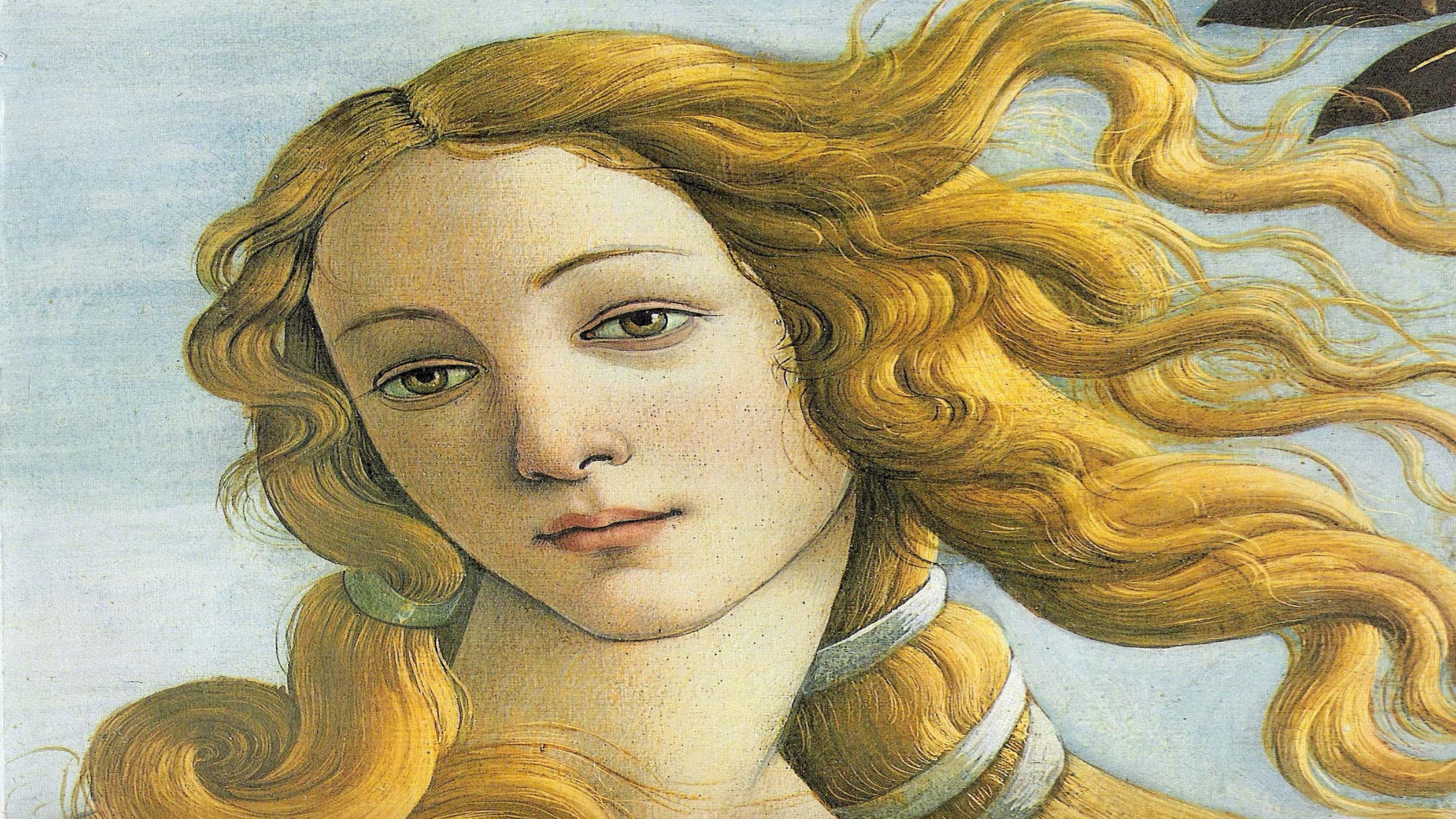
design thinking

designer mouse

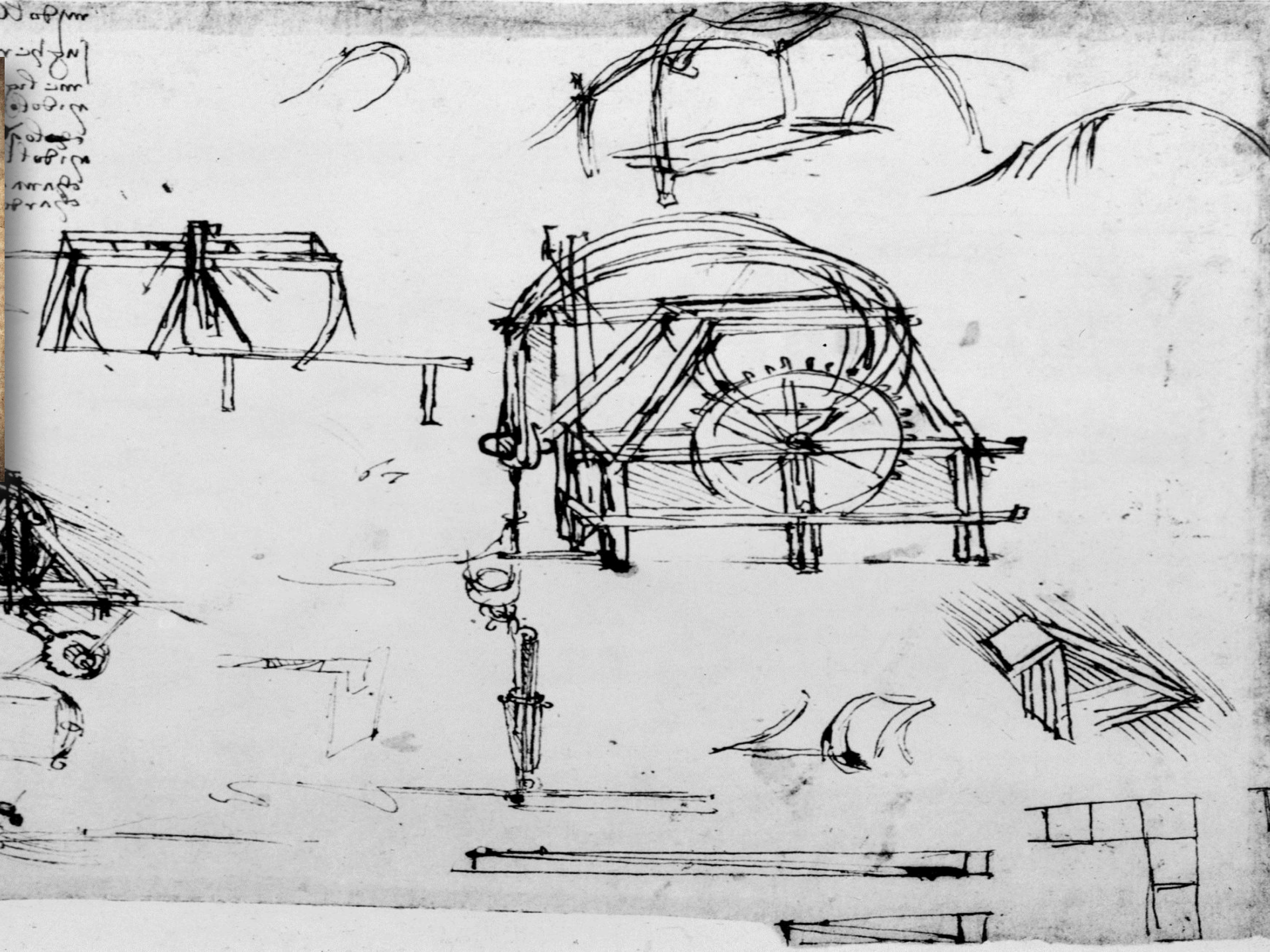
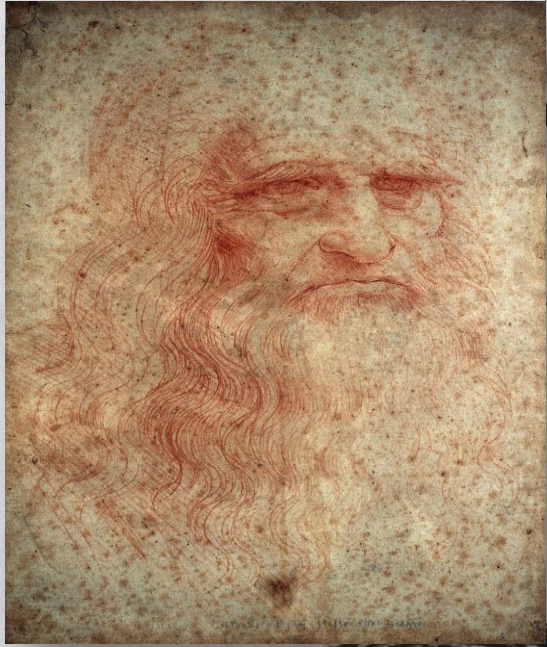
designer vodka

raise design IO







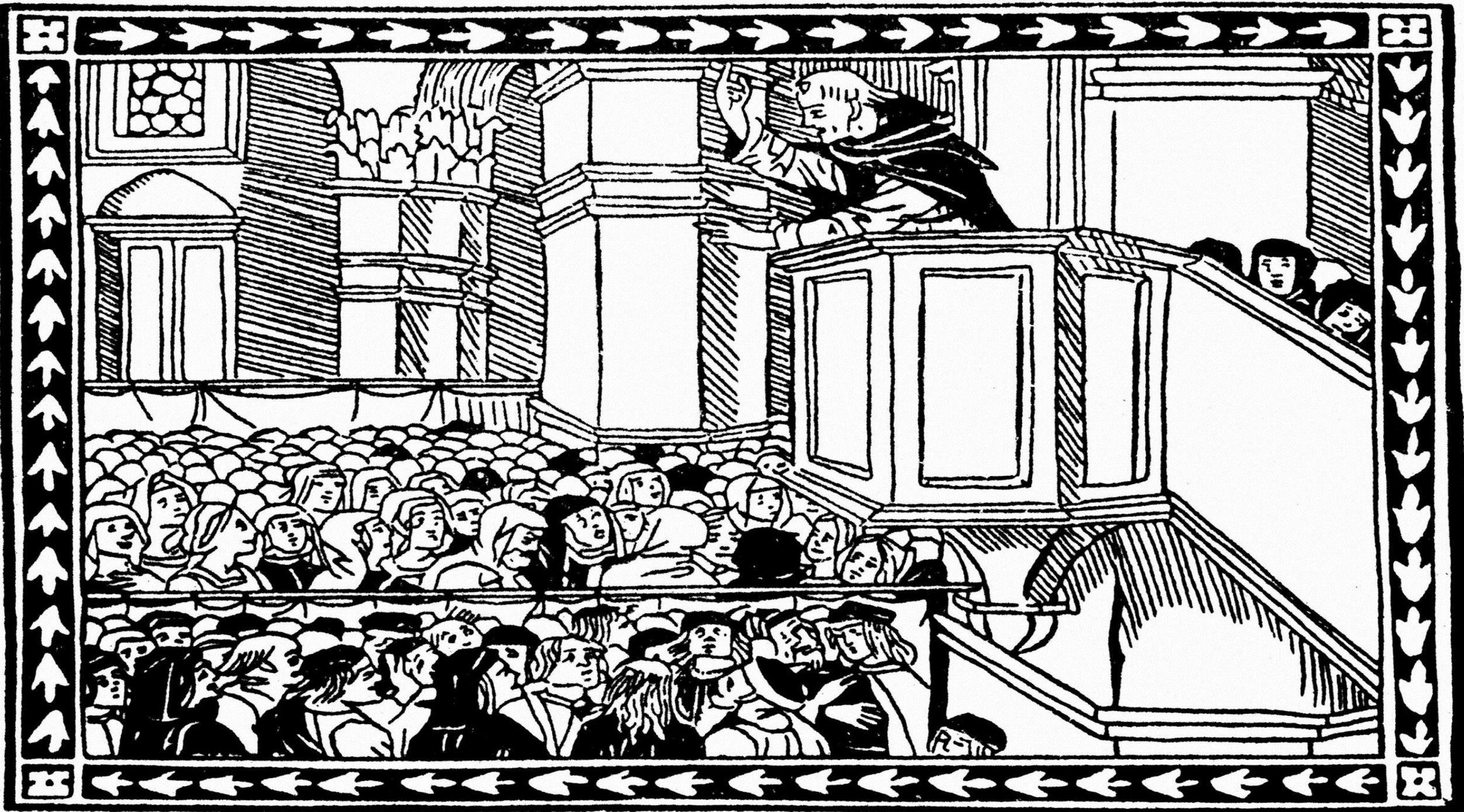


LAVRENTIVS MEDICES PETRI FILIVS.





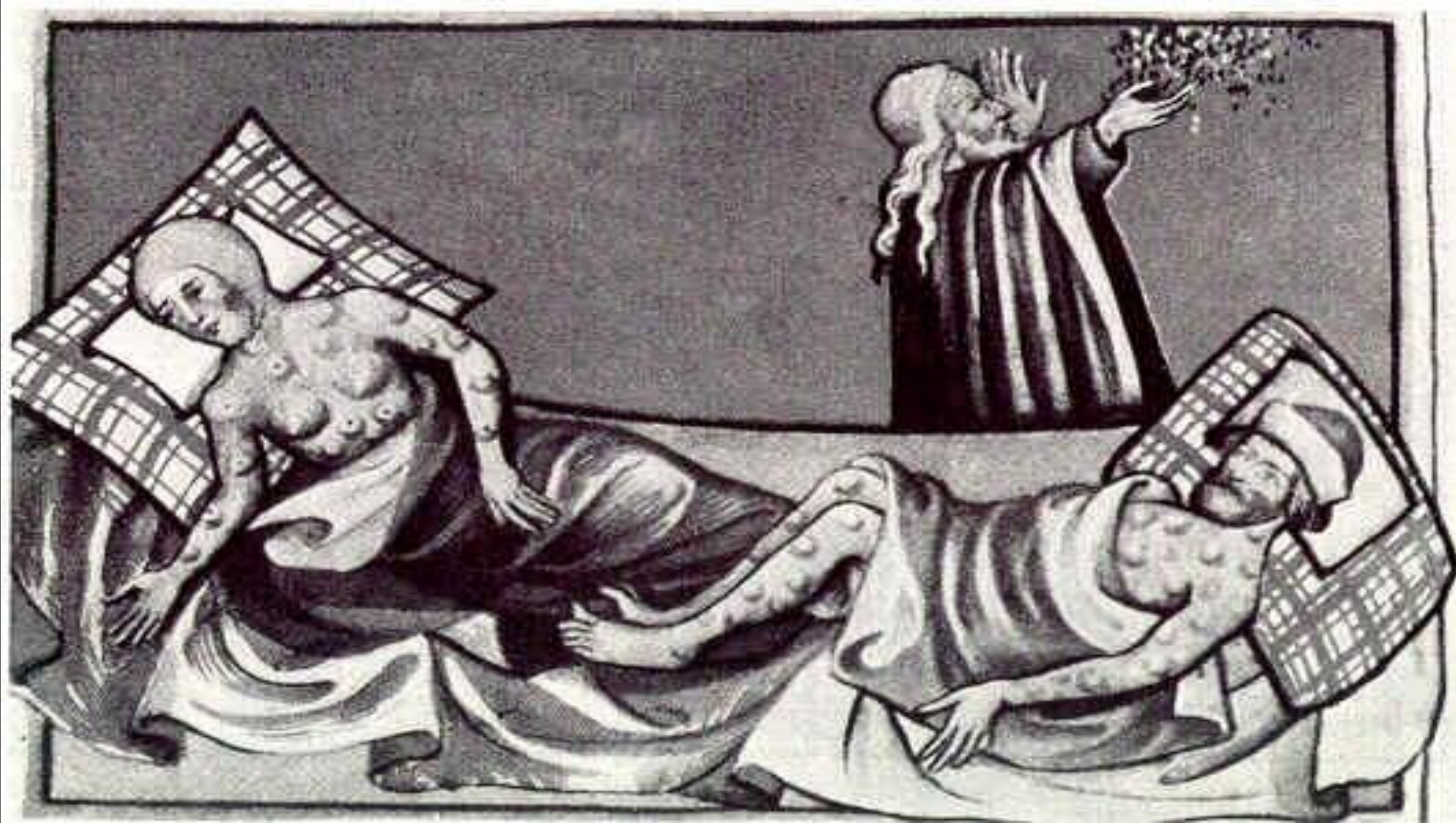


















DIALOGO
DI
GALILEO GALILEI LINCEO
MATEMATICO SOPRAORDINARIO
DELLO STUDIO DI PISA.
E Filosofo, e Matematico primario del
SERENISSIMO
GR.DVCA DI TOSCANA.

Dooue ne i congressi di quattro giornate si discorre
fopra i due

MASSIMI SISTEMI DEL MONDO
TOLEMAICO, E COPERNICANO;

*Proponendo indeterminatamente le ragioni Filosofiche, e Naturali
tanto per l'una, quanto per l'altra parte.*

CON PRI

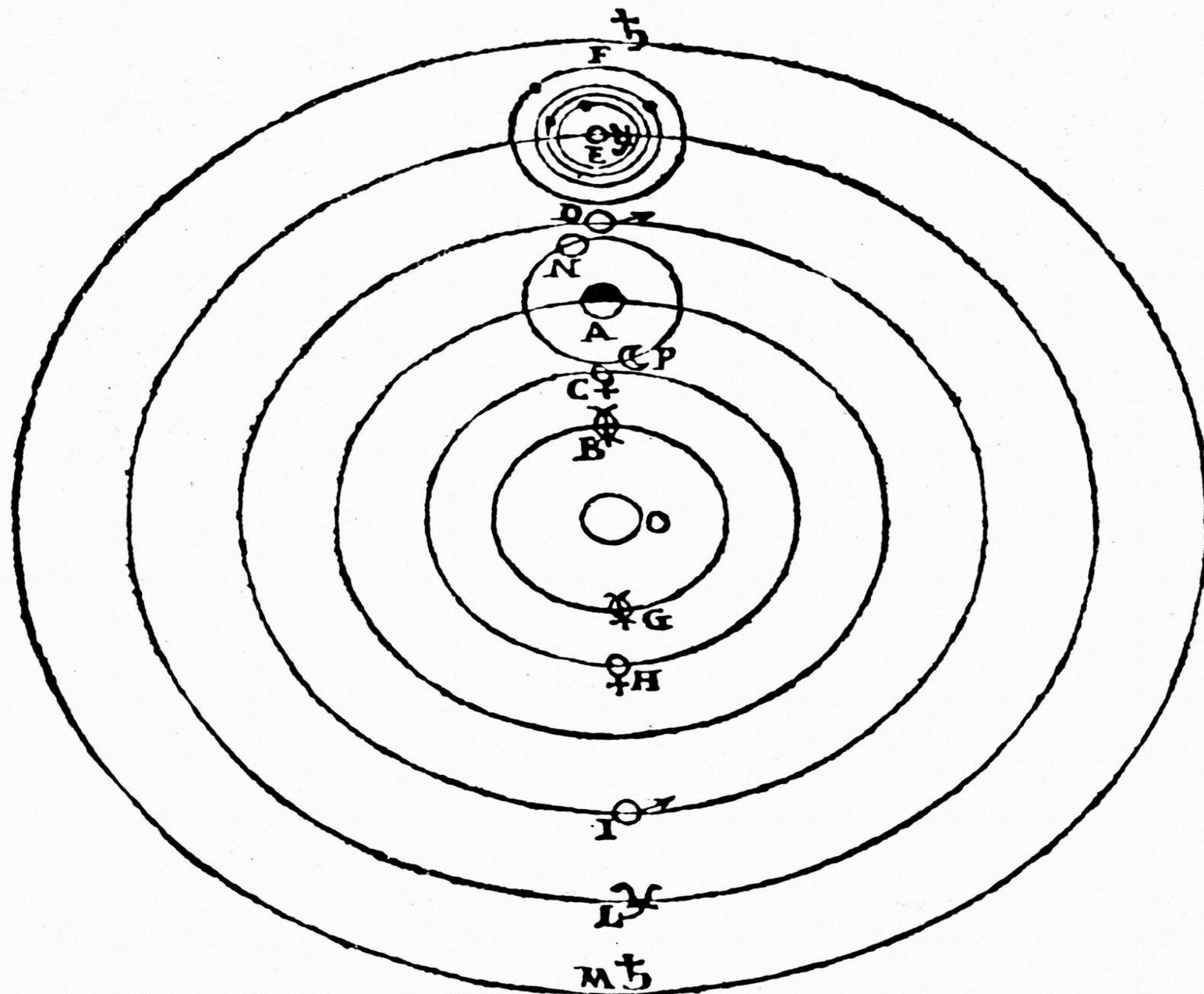


VILEGI.

IN FIORENZA, Per Gio:Batista Landini MDCXXXII.

CON LICENZA DE' SUPERIORI.





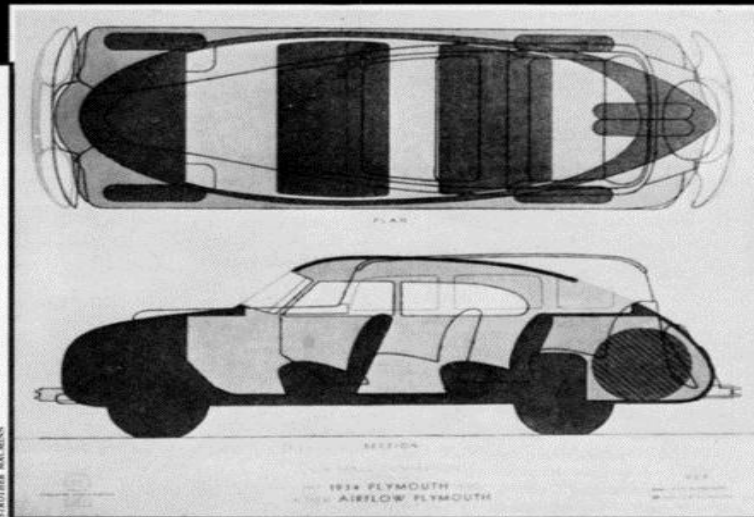
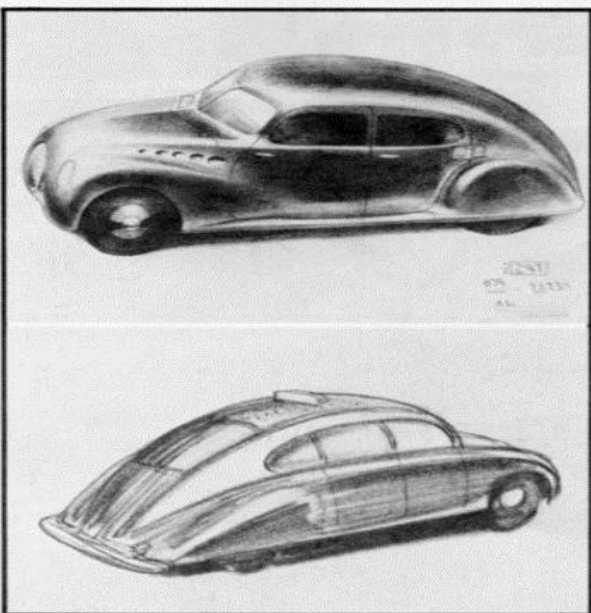
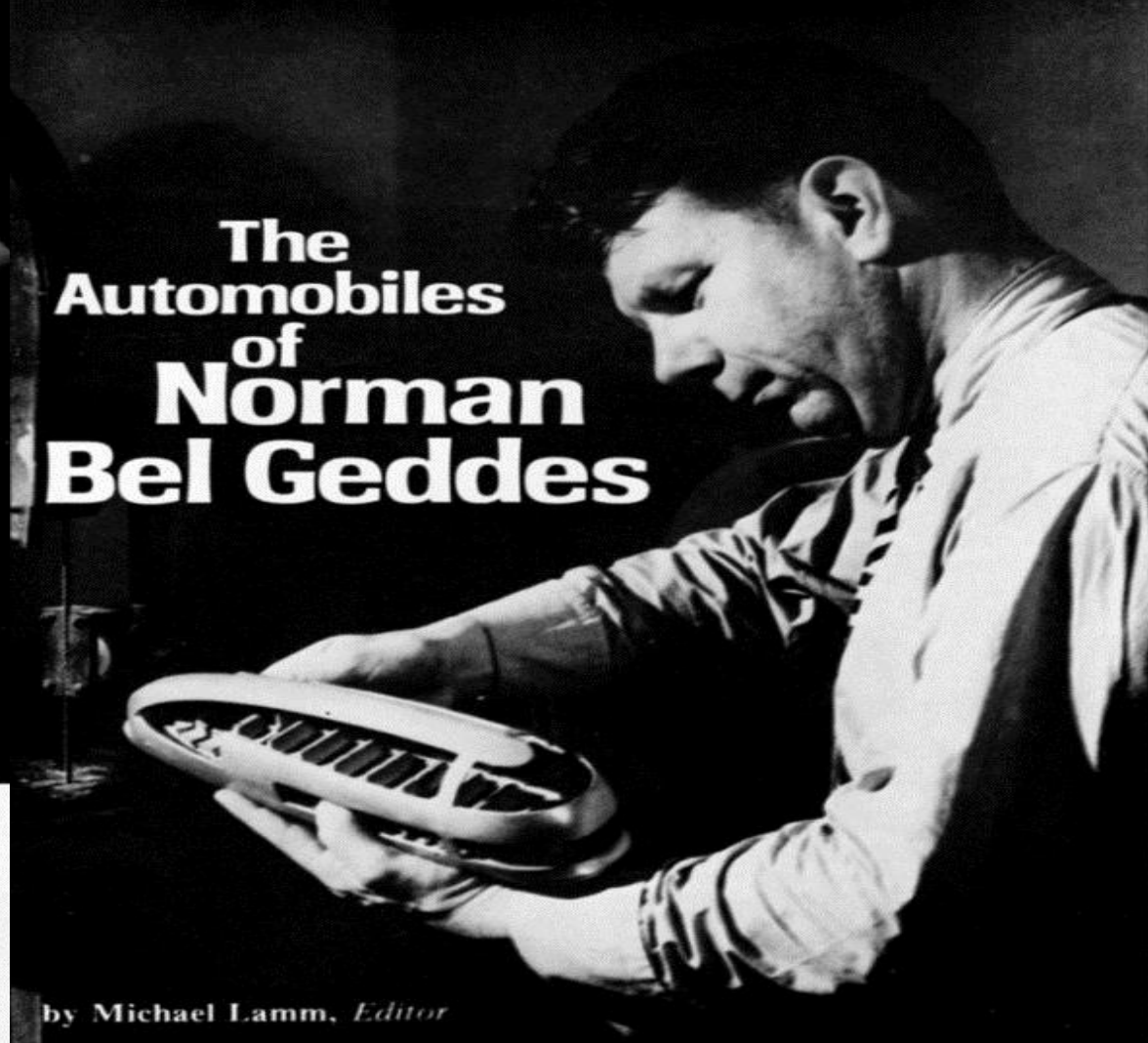






The Automobiles of Norman Bel Geddes

by Michael Lamm, Editor



Above: At the request of Chrysler Corp., Geddes did proposals for a Plymouth Airflow. Left: Geddes's design firm also did a great number of drawings for more graceful Chrysler and DeSoto Airflows; two are shown here.



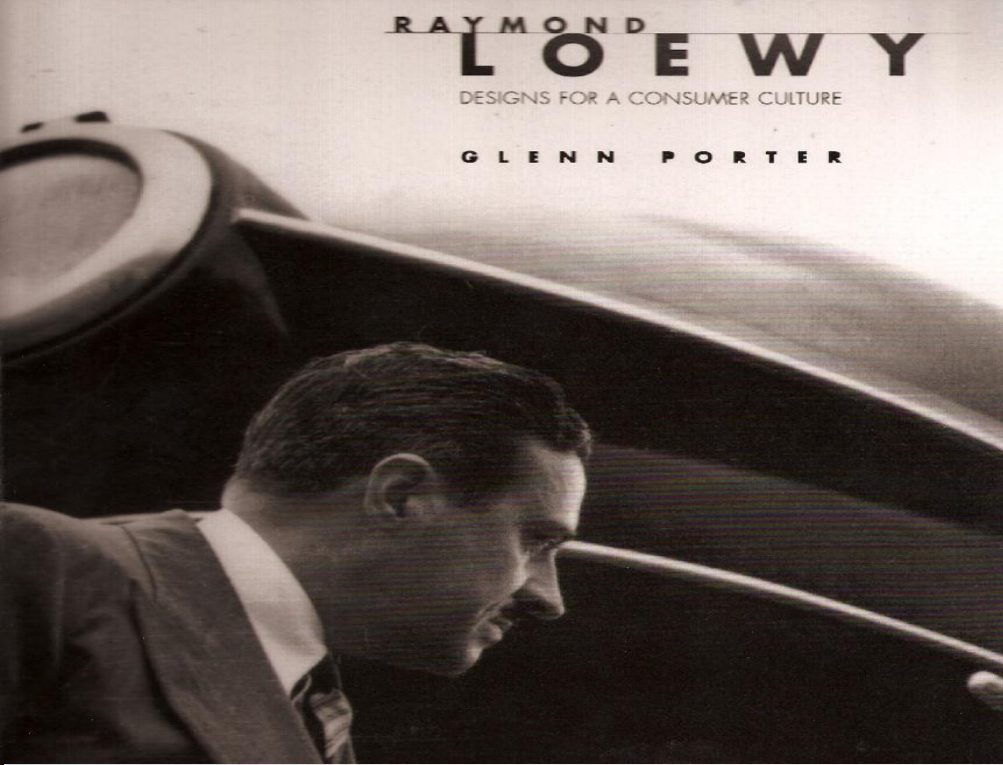


29 October 1929

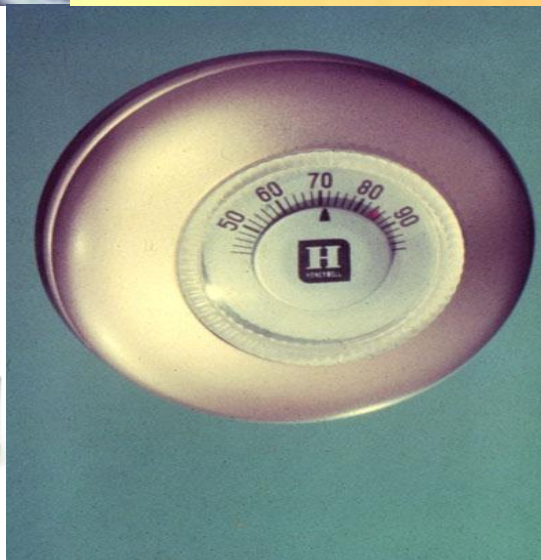




RAYMOND
LOEWY
DESIGNS FOR A CONSUMER CULTURE
GLENN PORTER











\$265



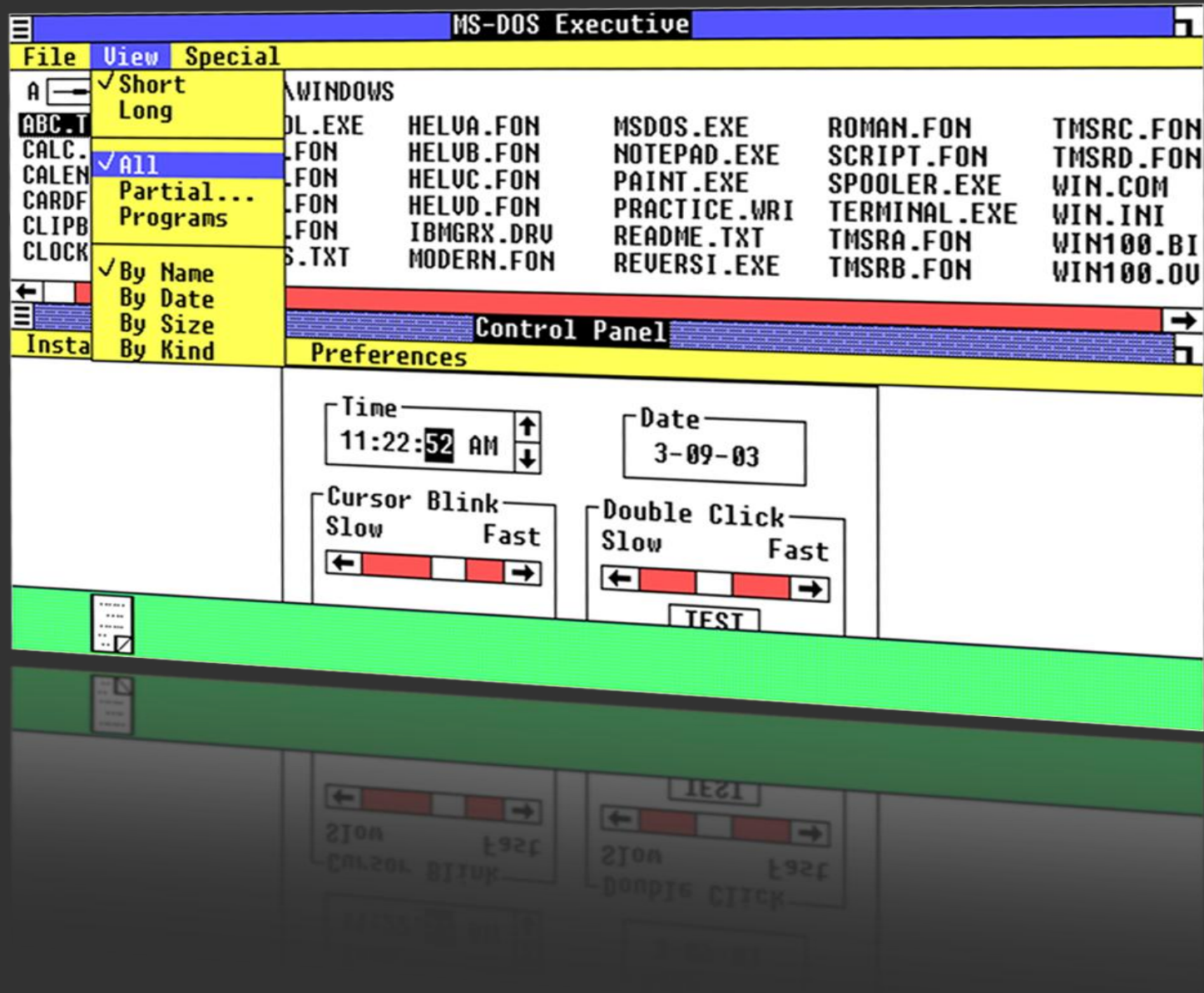
\$39.99

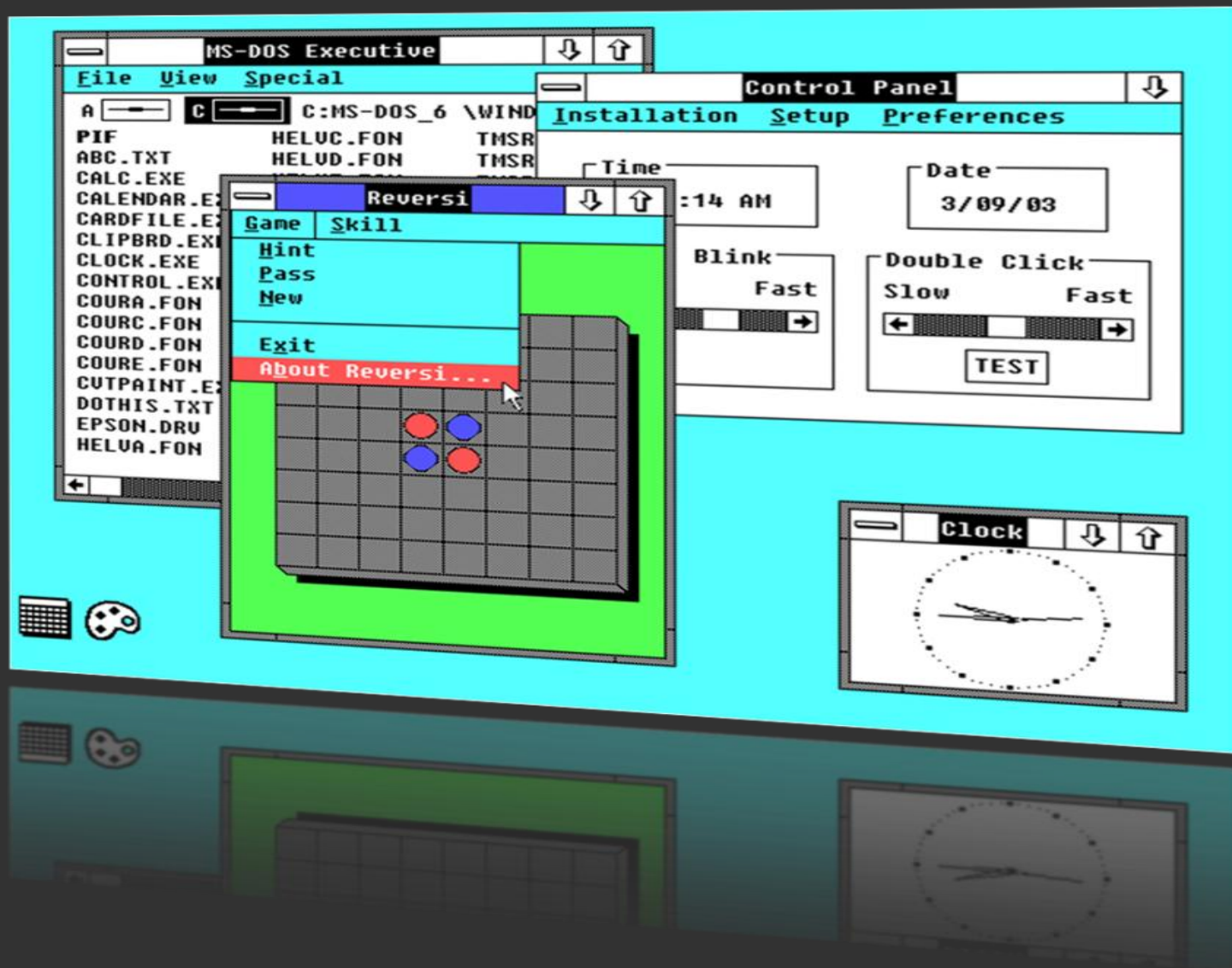
	5	5	10	15	20
MIS	RES	S/B	RES	S/B	Q/T
DELAY	DELAY	DELAY	Q/T	Q/T	DELAY
TRANS					
7	8	9	10	11	12
Q/T	0	0.5	1.0	1.5	2.0

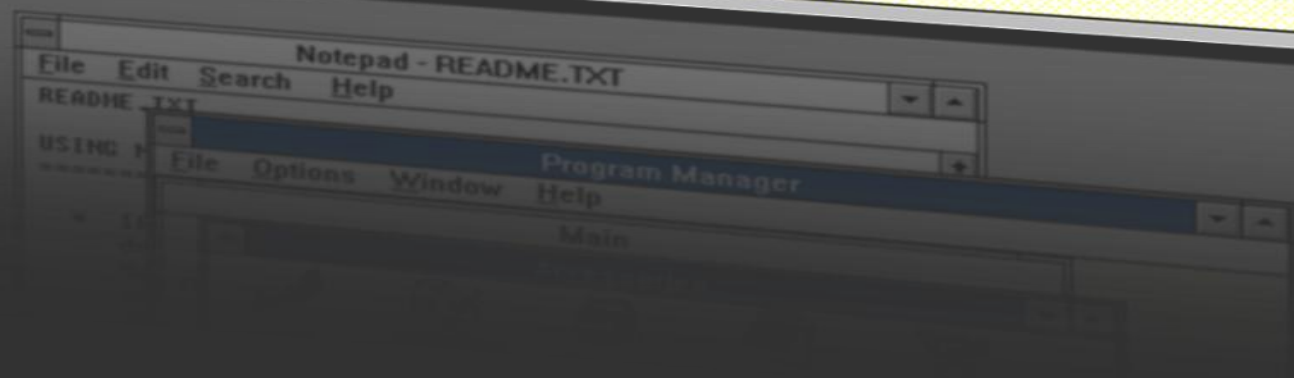
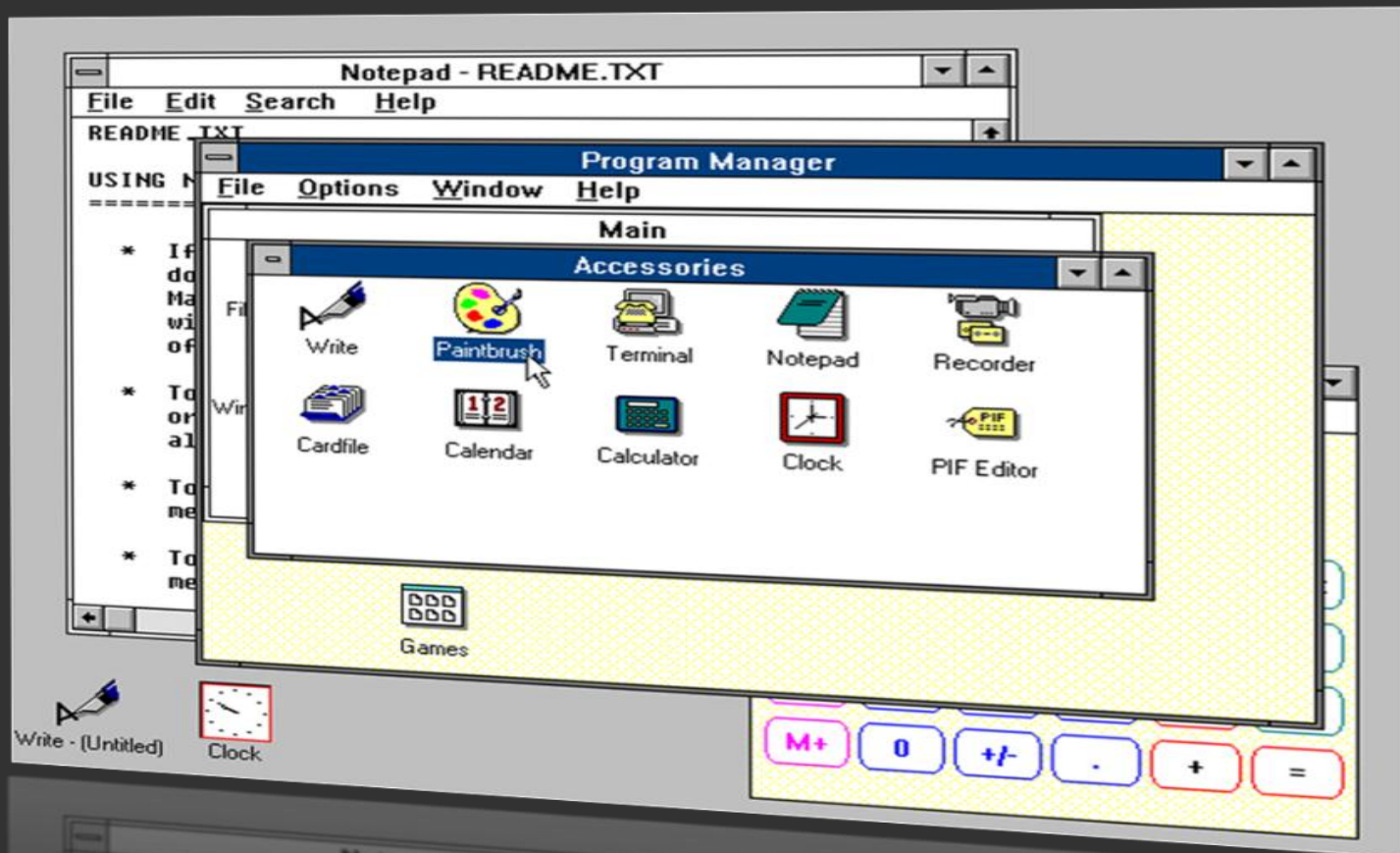
MAIN BODY TACK WELD

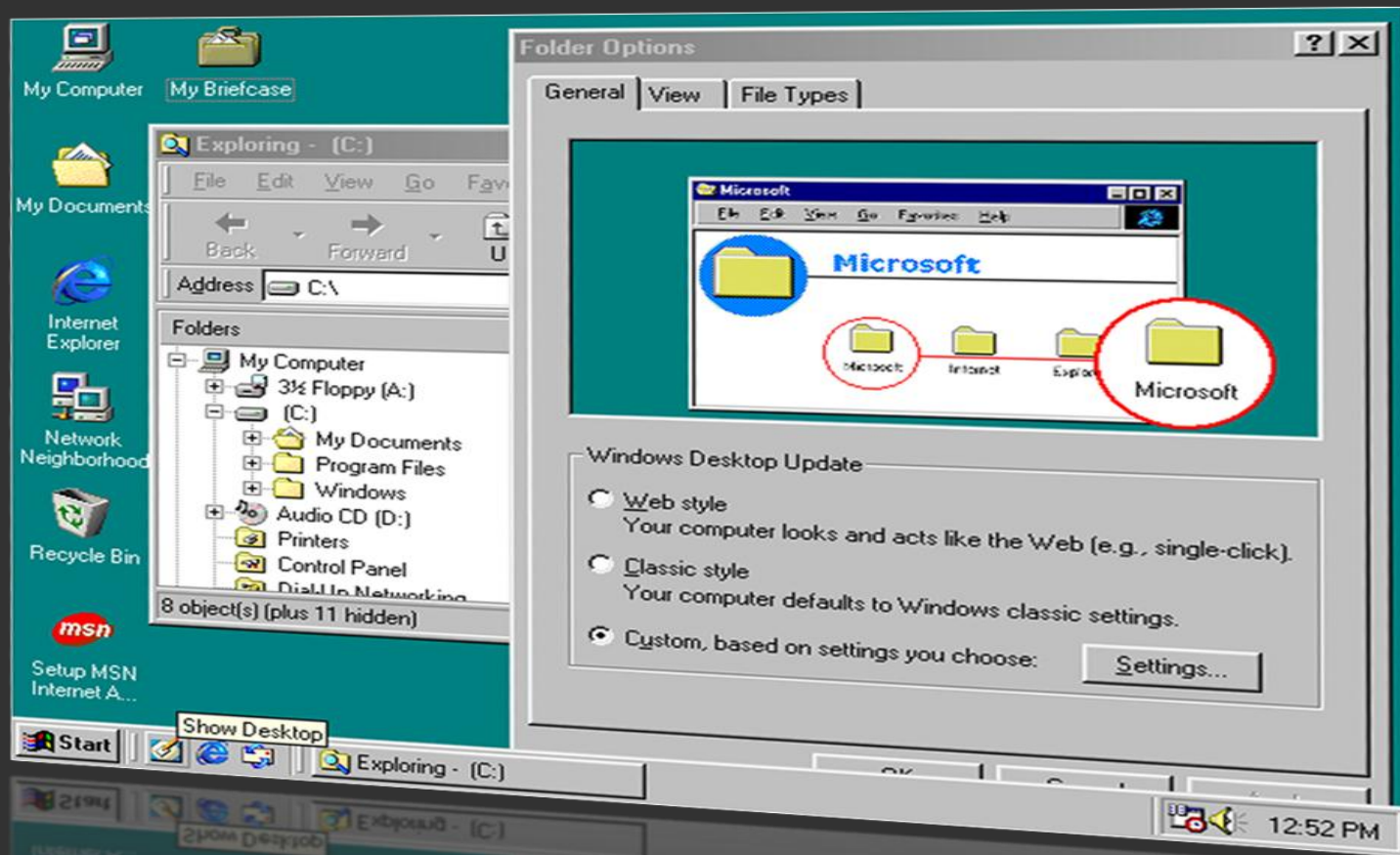
DO LLY No 5

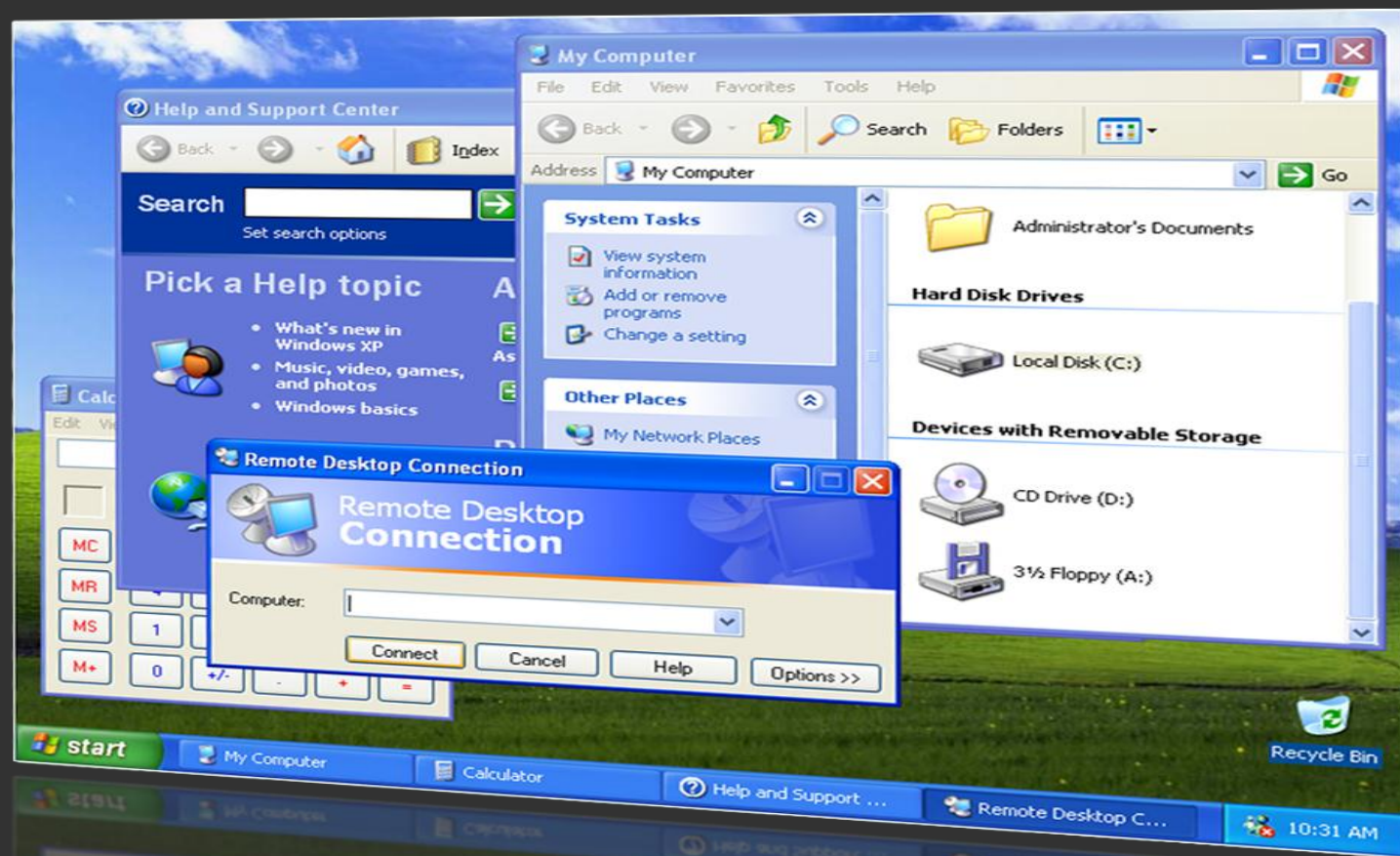
1985: Windows 1.0













Marci Hanan

options



Windows Vista
Windows Vista



Windows Vista
Windows Vista



options



Marci Hanan





The value of design has changed...

Luxury

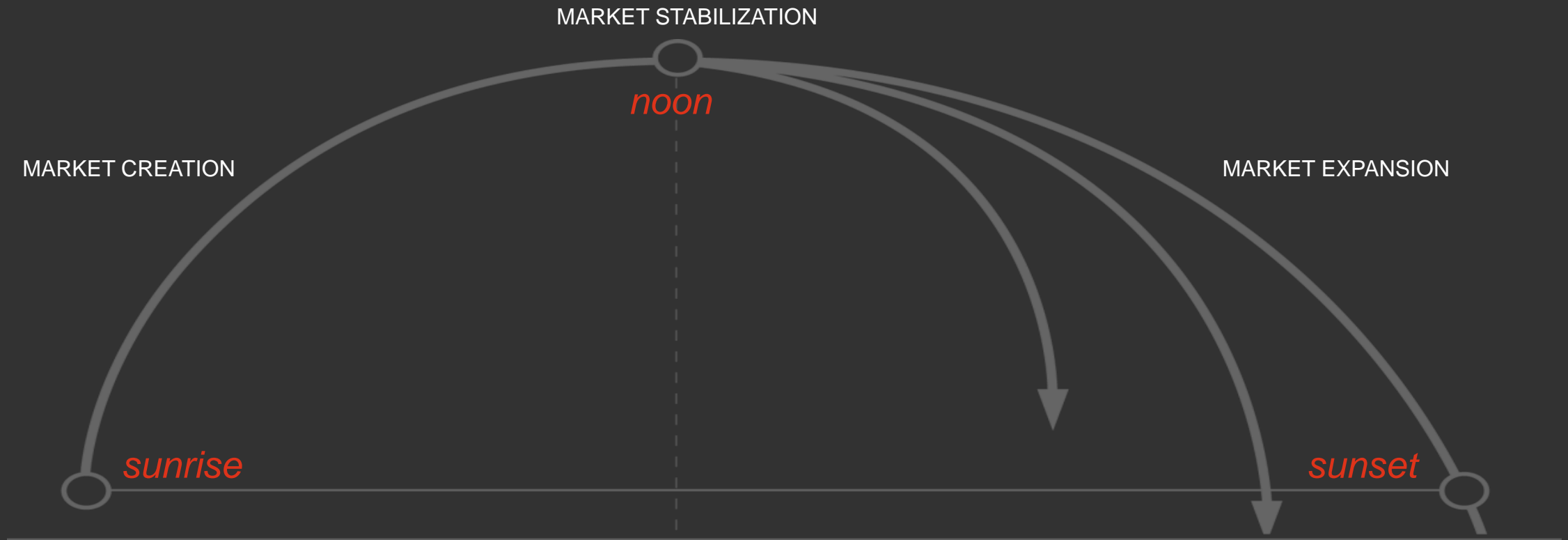
1993 1994 1995 1996 1997 1998 1999 2000 2002 2004 2005 2006 2007 2009 2010

The value of design has changed...

Critical

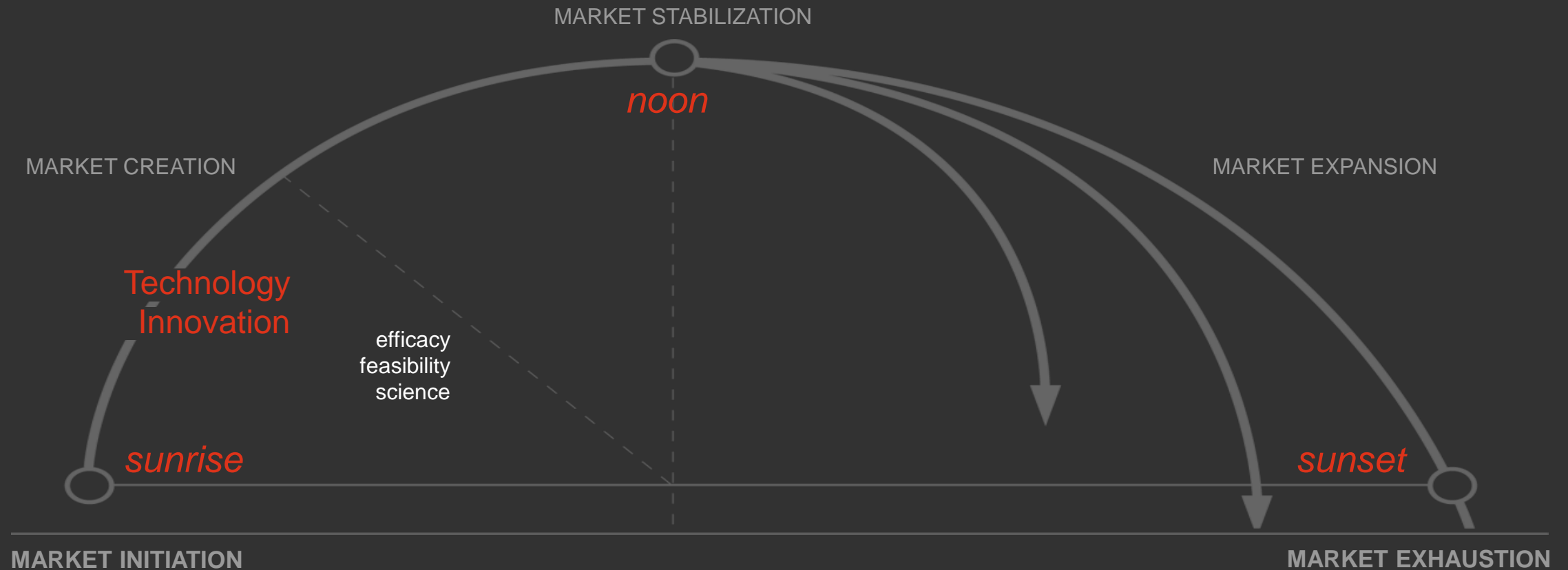
1993 1994 1995 1996 1997 1998 1999 2000 2002 2004 2005 2006 2007 2009 2010

the lifecycle of technology products



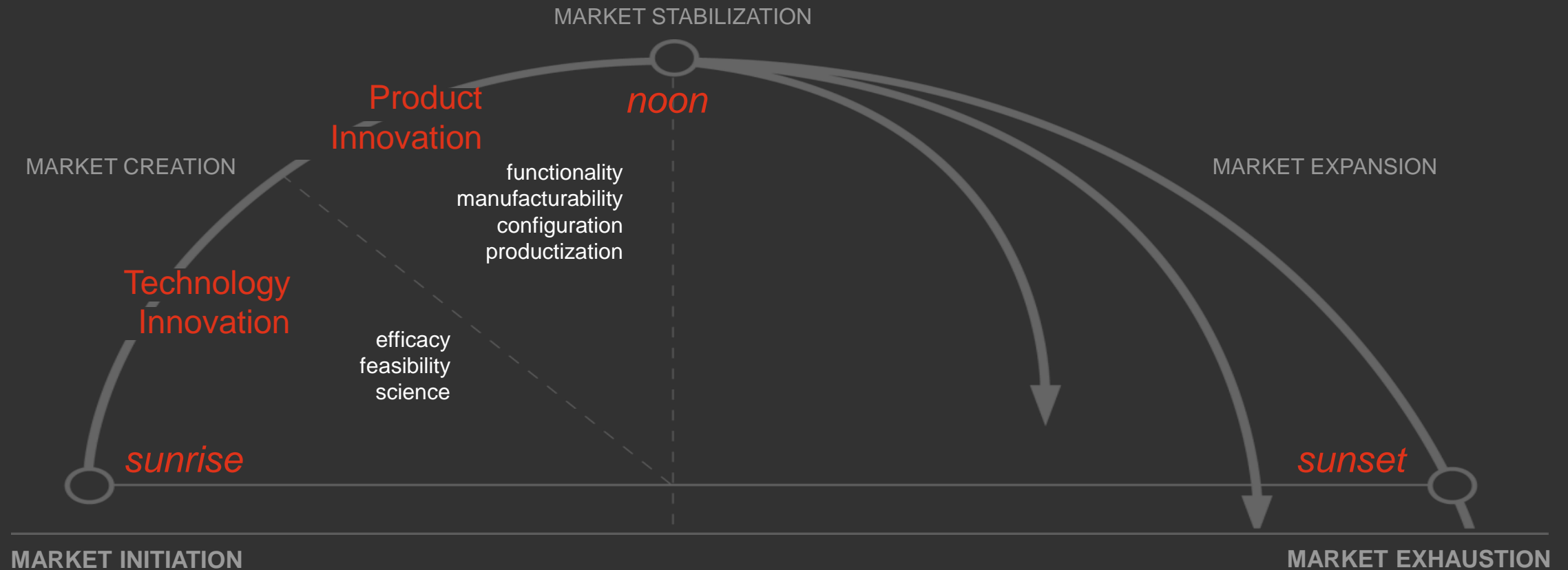
From Sony's "Digital Dreams: The Work of the Sony Design Center" by Paul Kunkel

the lifecycle of technology products



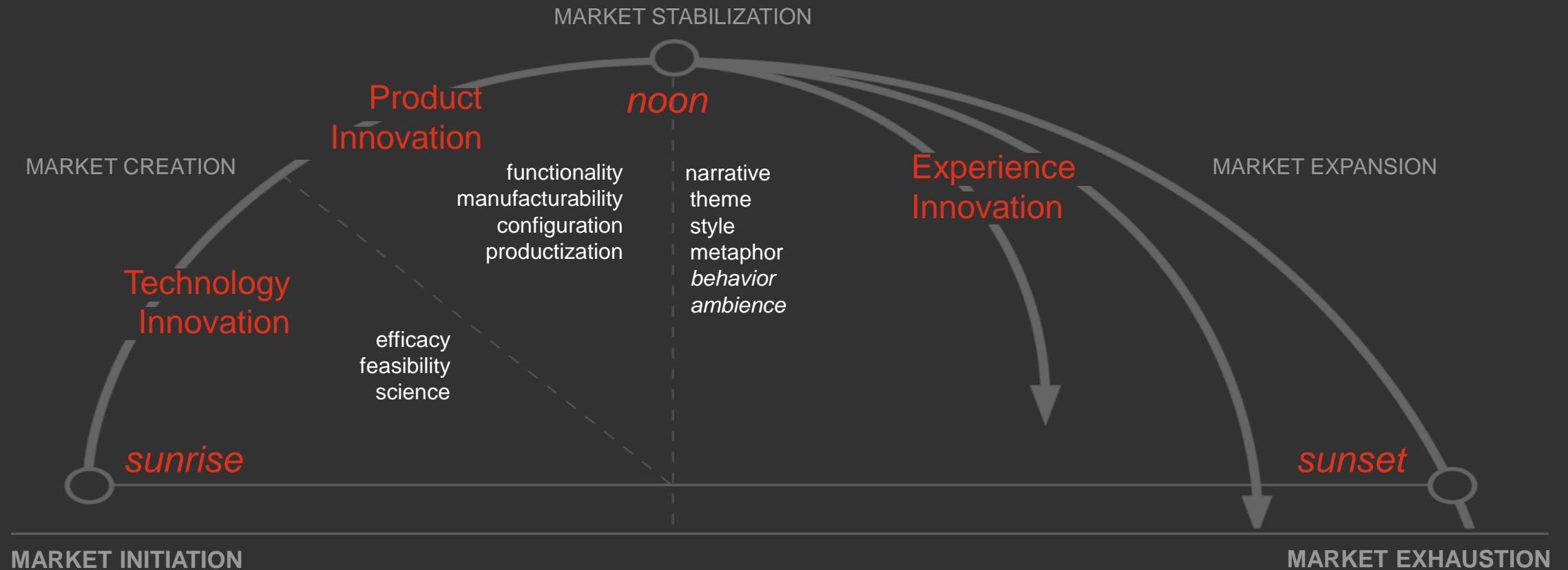
From Sony's "Digital Dreams: The Work of the Sony Design Center" by Paul Kunkel

the lifecycle of technology products



From Sony's "Digital Dreams: The Work of the Sony Design Center" by Paul Kunkel

the lifecycle of technology products



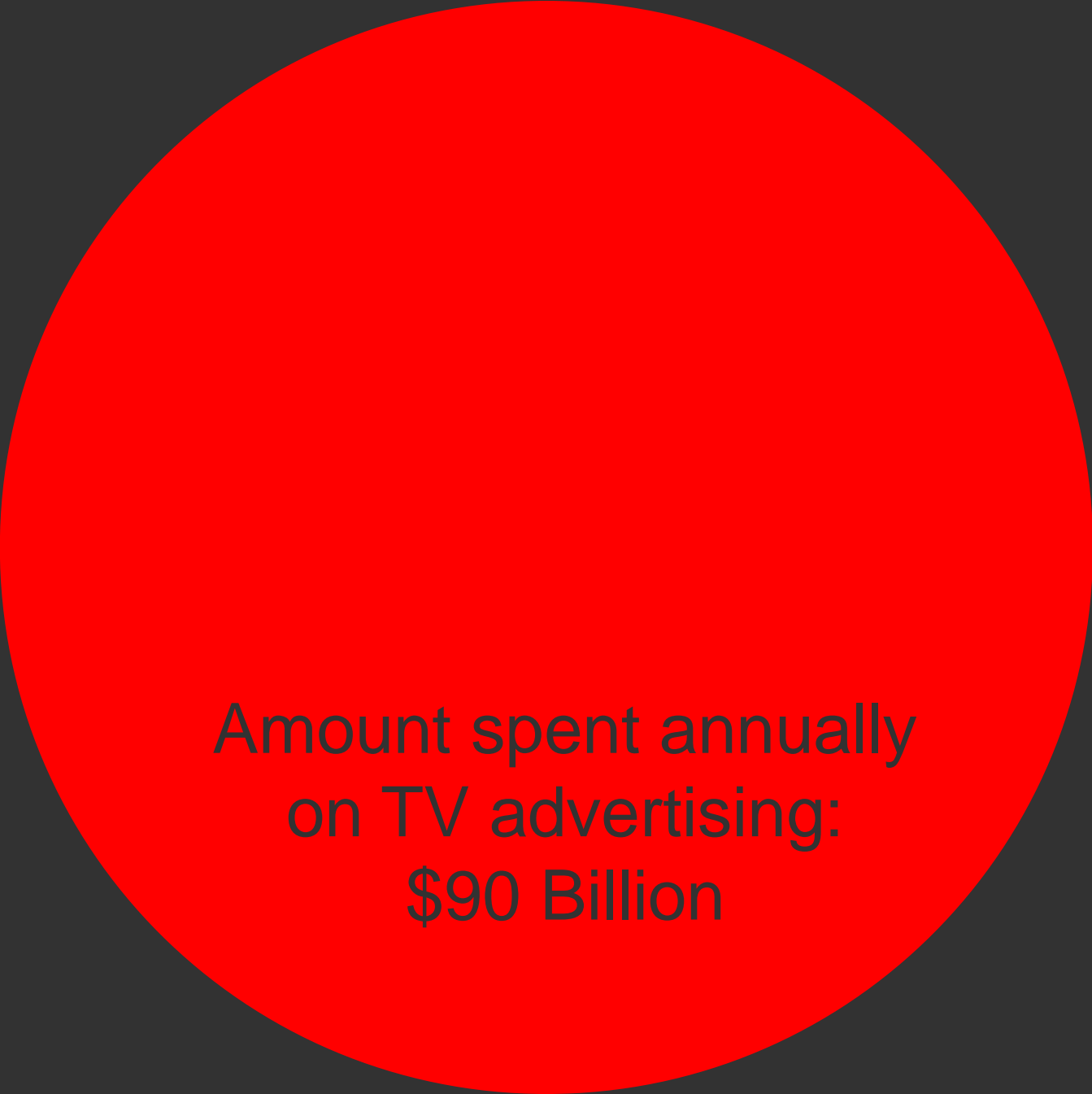
From Sony's "Digital Dreams: The Work of the Sony Design Center" by Paul Kunkel



Loyalty



Trust



Amount spent annually
on TV advertising:
\$90 Billion

Power Shift

Economy of Scale

> Economy of Choice

Simple markets

> Complex markets

National markets

> Global markets

Opportunistic

> Cynical Consumers

Extrinsic Value

> Intrinsic Value

A bodybuilder is shown in a side-on pose, flexing their right arm. The bodybuilder's skin is tanned and oiled, highlighting the extreme muscle definition of their back, shoulders, and legs. They are wearing black posing trunks. The background is solid black.

Producers were powerful



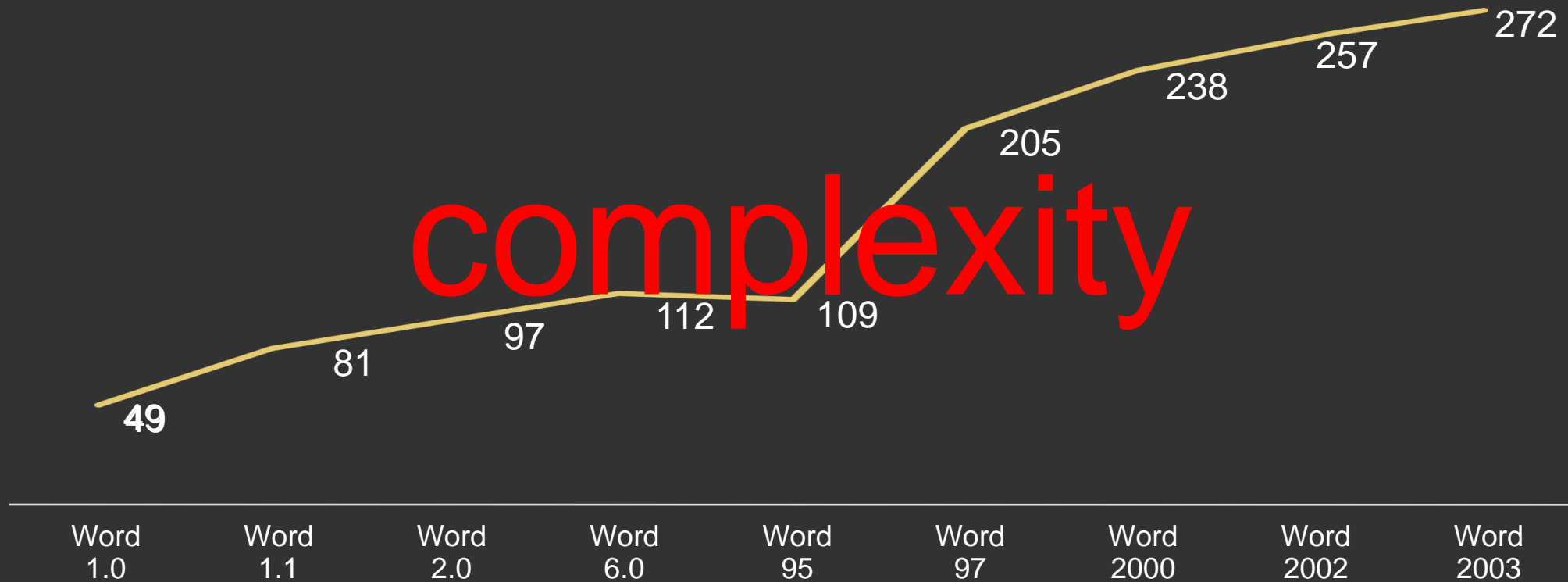
Consumers are powerful



Markets of one



menu commands in Word over time



200+

NUMBER OF PRODUCTS WE RELEASED
LAST YEAR

pace

1,000,000,000

NUMBER OF USERS OF WINDOWS IN THE NEXT DECADE

scale

diversity

130+

NUMBER OF LANGUAGES SUPPORTED
BY WINDOWS

~650,000

NUMBER OF SOFTWARE COMPANIES
WORLDWIDE WHO BUILD PRODUCTS
THAT RUN ON WINDOWS

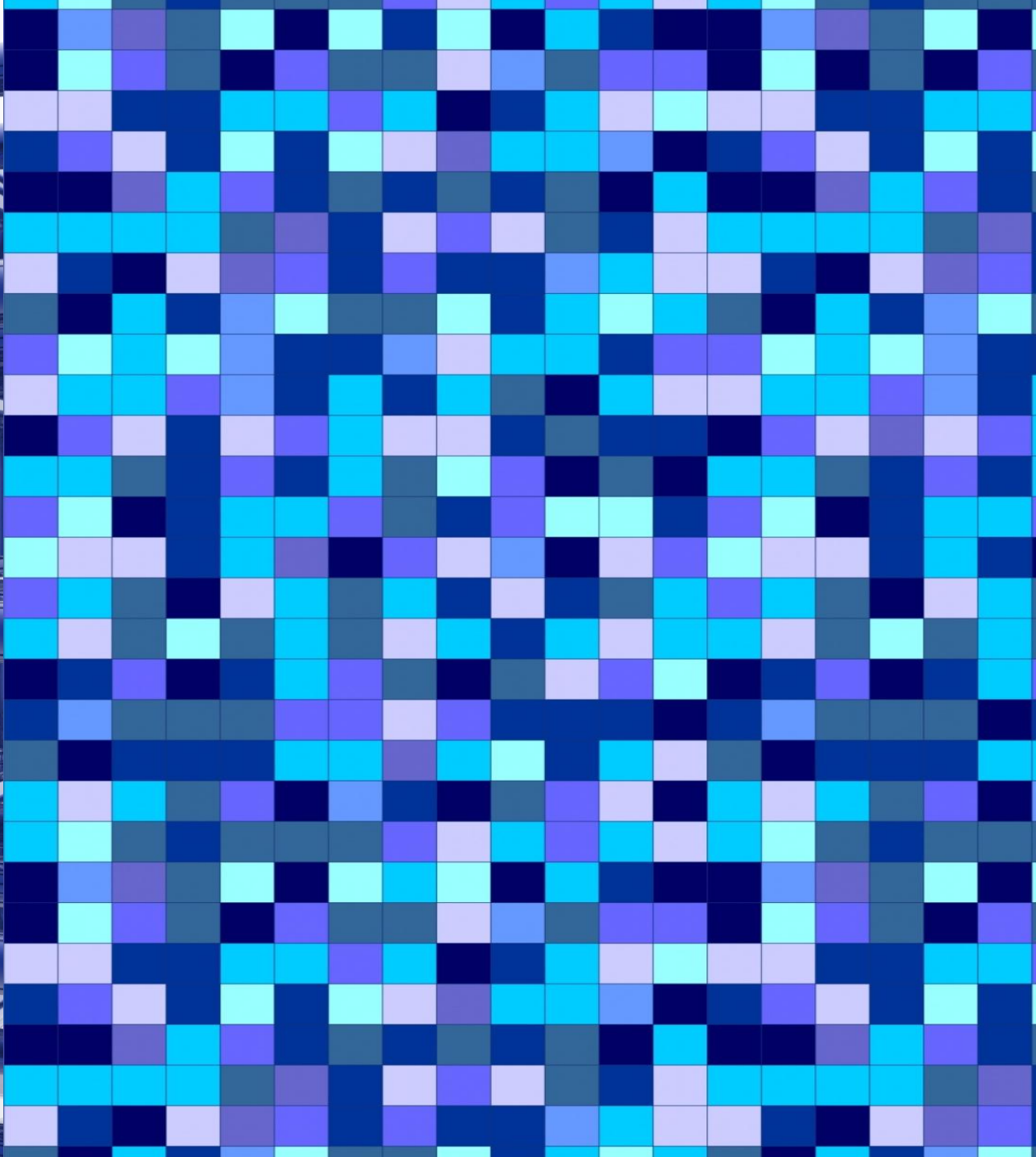
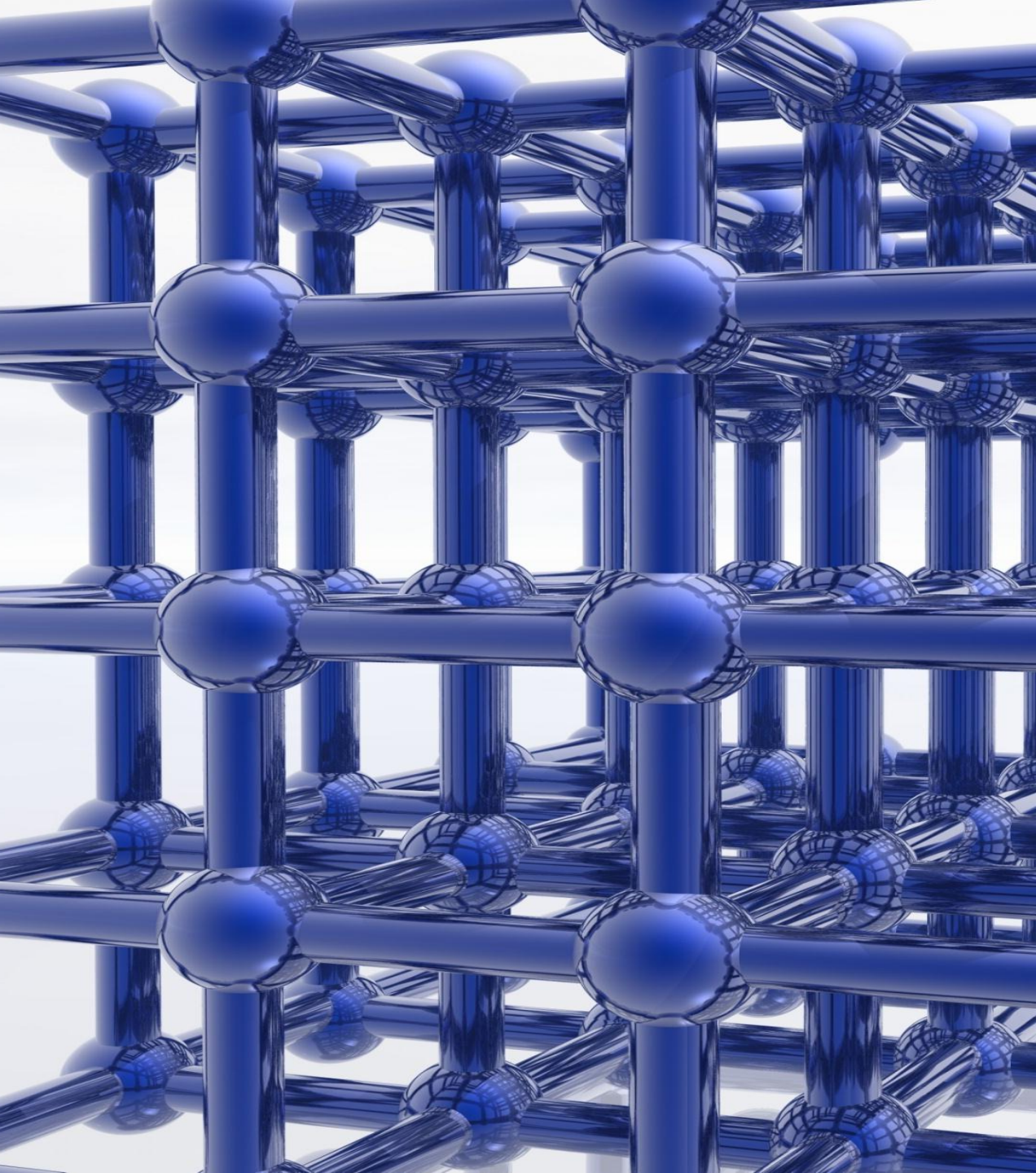
partnering

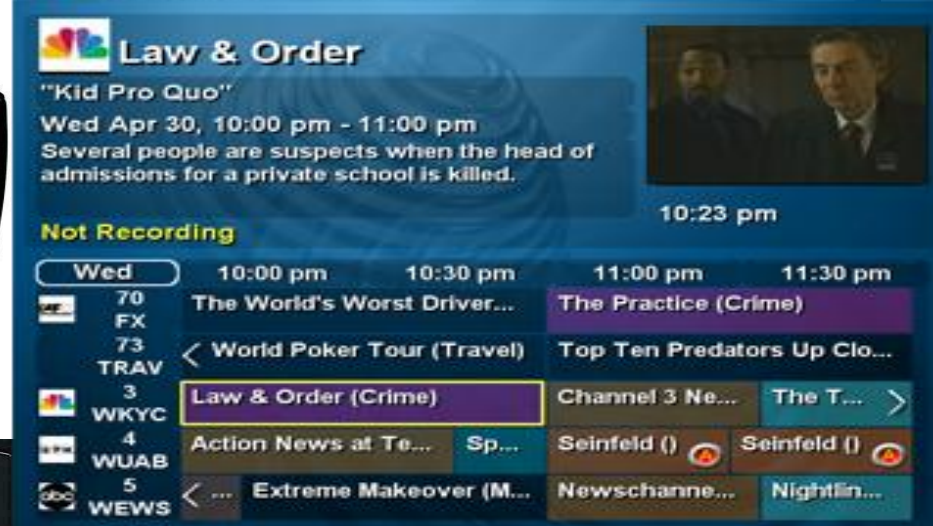
collaboration

360+

NUMBER OF
INTERNAL PRODUCT
DEVELOPMENT TEAMS









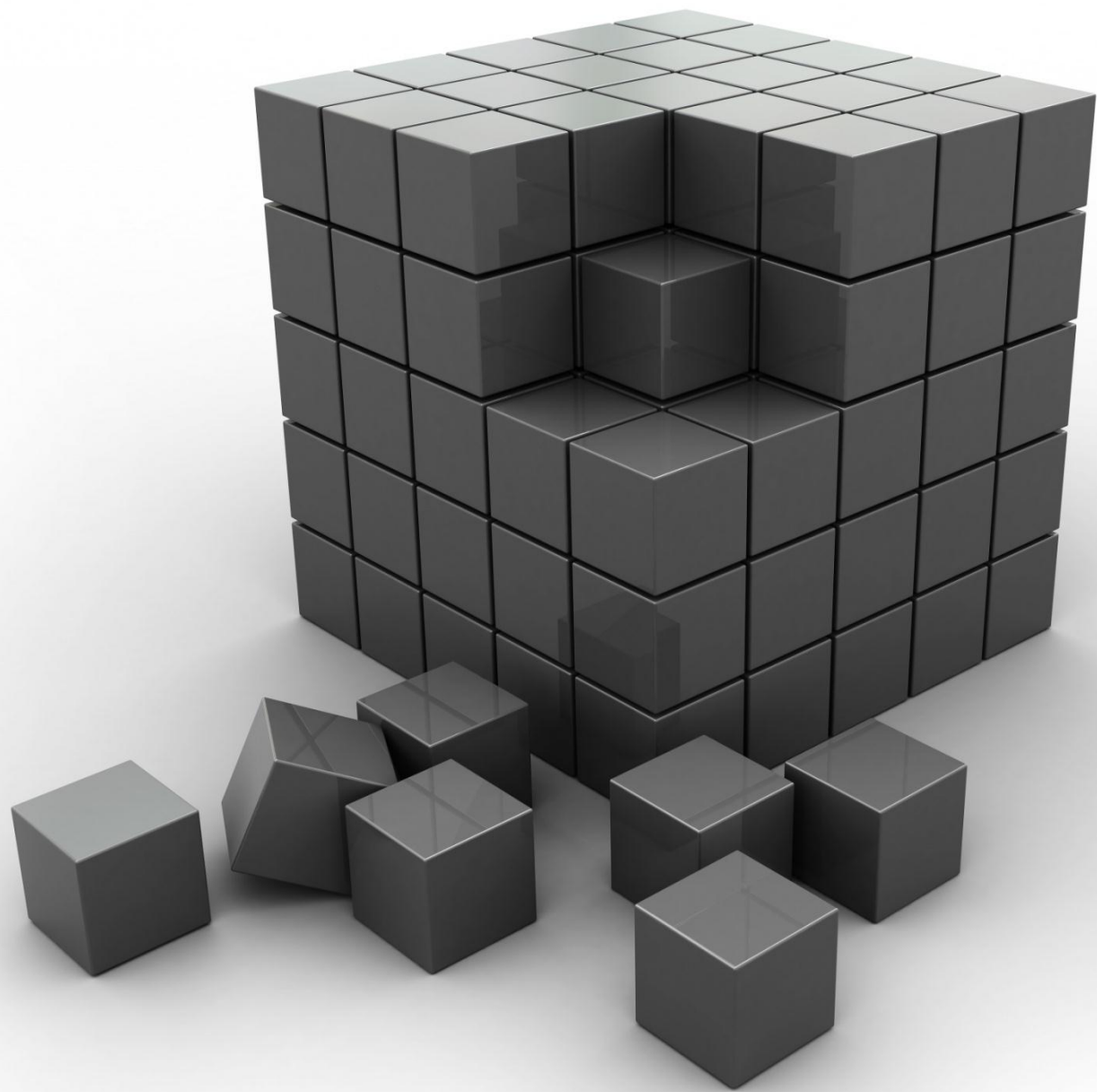


technology
innovations are
successfully
mastering
complexity

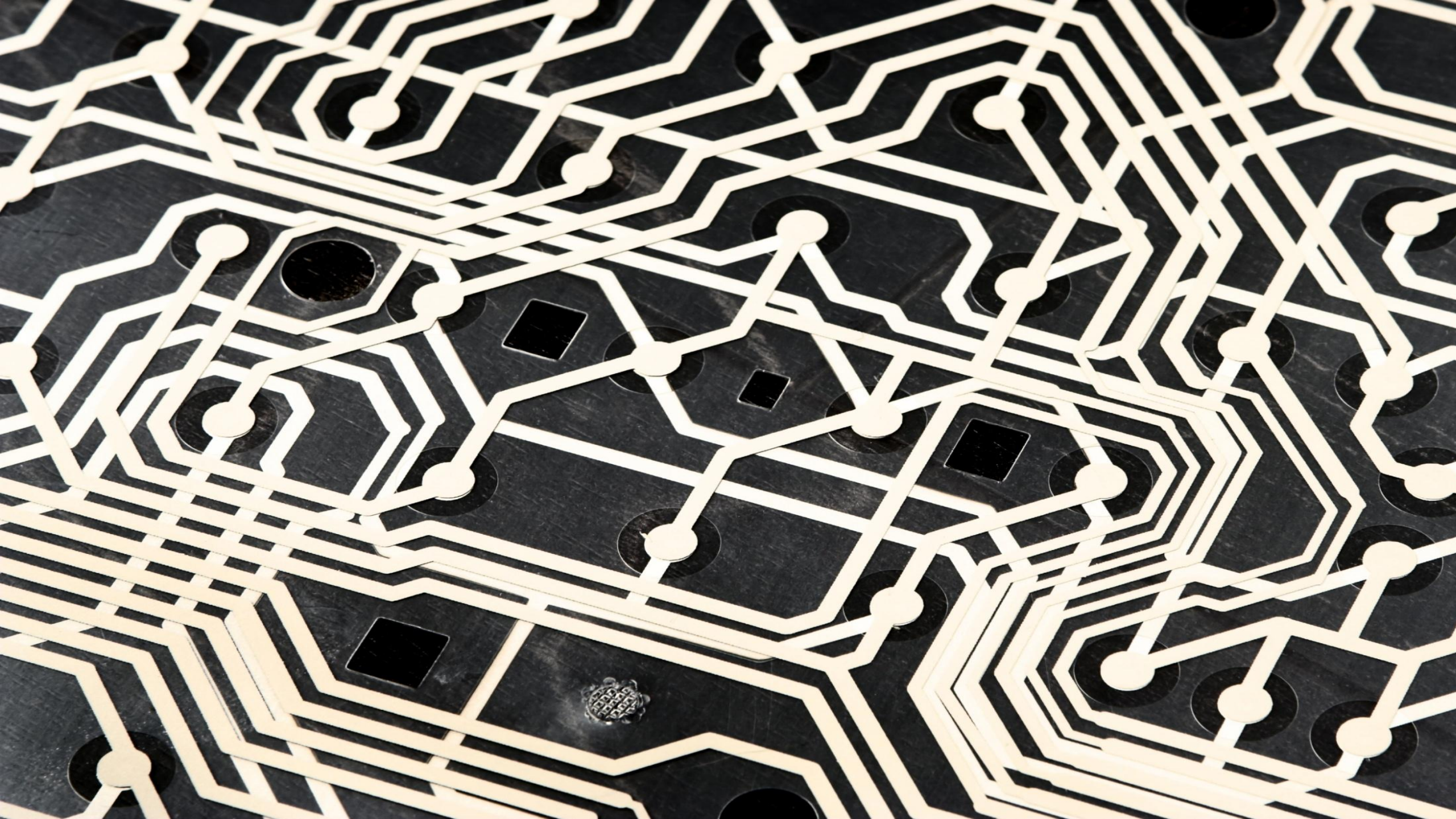


the real
innovation
challenge
today is to
master
simplicity

wicked problems









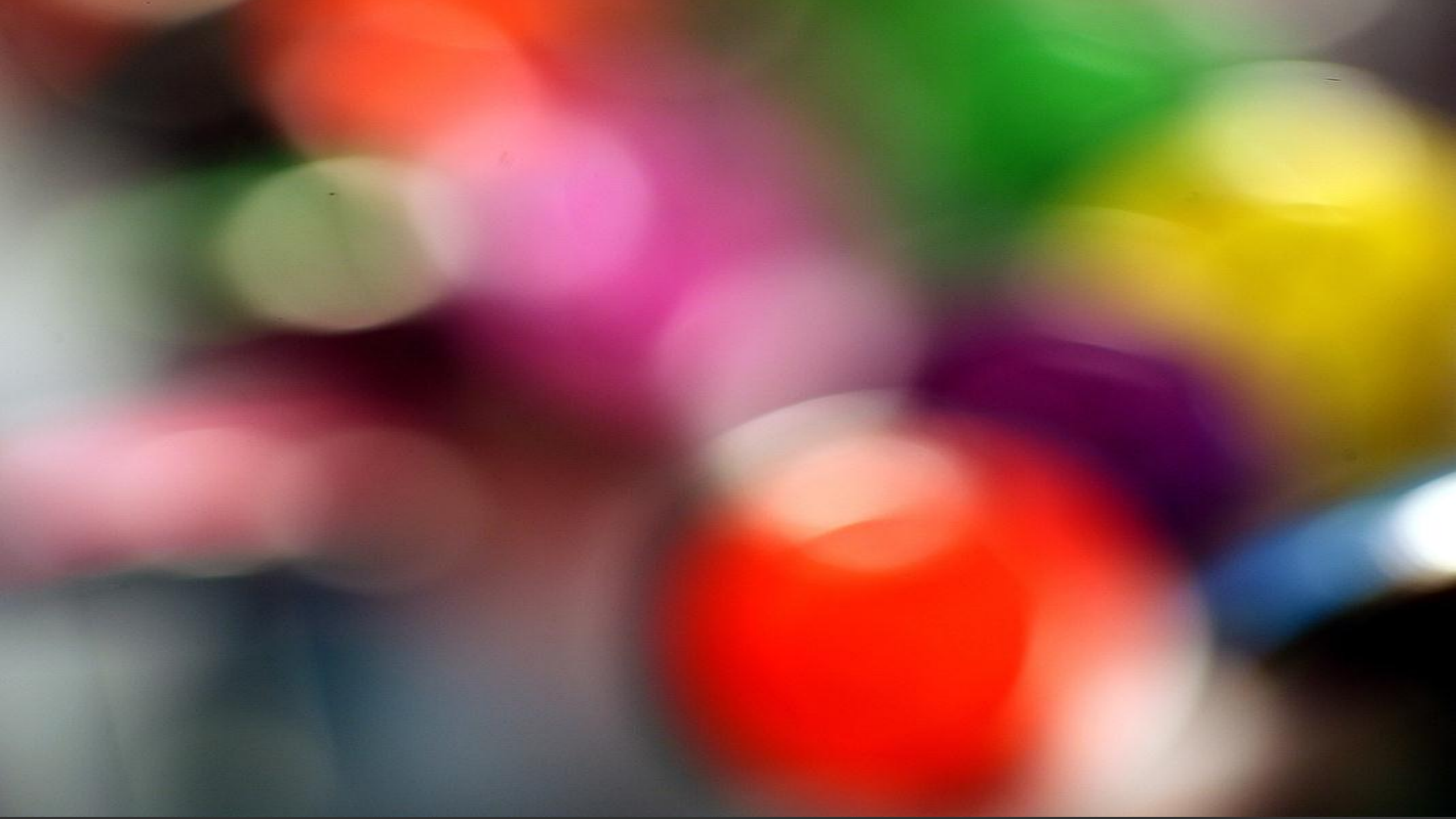






Left Brain

uses logic
detail oriented
facts rule
words and language
time aware
can comprehend
order/pattern perception
knows object name
reality based
forms strategies
practical
safe





Right Brain

nonlinear

"big picture" oriented

imagination rules

presents possibilities

uses feeling

symbols and images

meaning-centered

believes

appreciates

spatial

fantasy based

risk taking



A stylized illustration of a human brain in light blue with black outlines of the gyri and sulci. The brain is centered and surrounded by concentric rings of color: a thin red ring immediately adjacent to the brain, followed by a wider orange ring, and an outermost yellow ring that fills the background. A semi-transparent horizontal band in a muted teal color passes behind the brain, containing the title text in yellow.

Whole Brain Creativity

A black and white photograph of Albert Einstein, with his characteristic wild hair and mustache, looking towards the camera while writing on a chalkboard. He is wearing a dark suit jacket. The chalkboard is filled with mathematical equations. The most prominent equation is $R_{ik} = 0$, written in large, cursive chalk. Above it, the equation $R_{ik} = 0$ is faintly visible. To the right, another equation $R_{ik} = 0$ is partially visible. The chalkboard has a mottled, aged appearance.
$$R_{ik} = 0$$

Deductive



Inductive

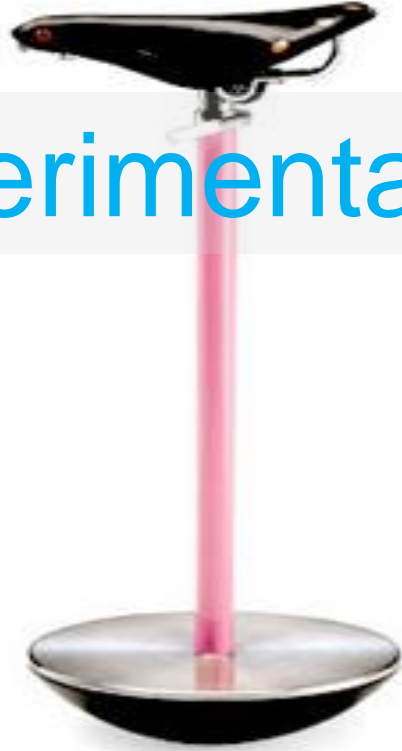
Abductive





people first

experimentalism



wild

organic

architectural

optimism

POSITIONING MATRIX

mild

ASTRO



An overhead view of three business professionals (two men and one woman) gathered around a wooden desk, collaborating on a project. They are looking at and pointing to architectural blueprints spread across the desk. A laptop is open in the foreground. The woman on the left is wearing a white blouse, and the two men are wearing light blue shirts. The word "Collaboration" is overlaid in the center in a blue, sans-serif font.

Collaboration



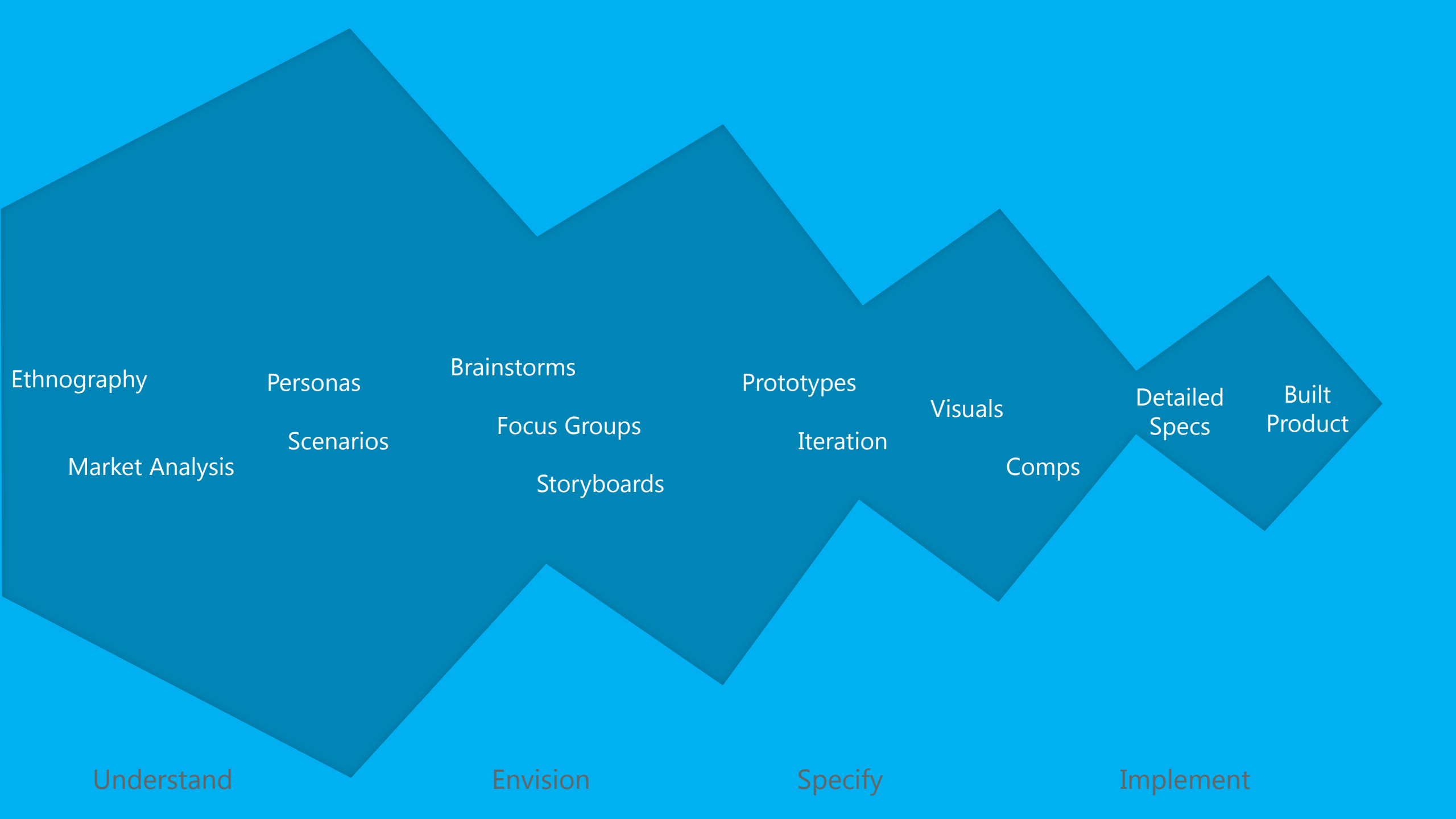
Observation



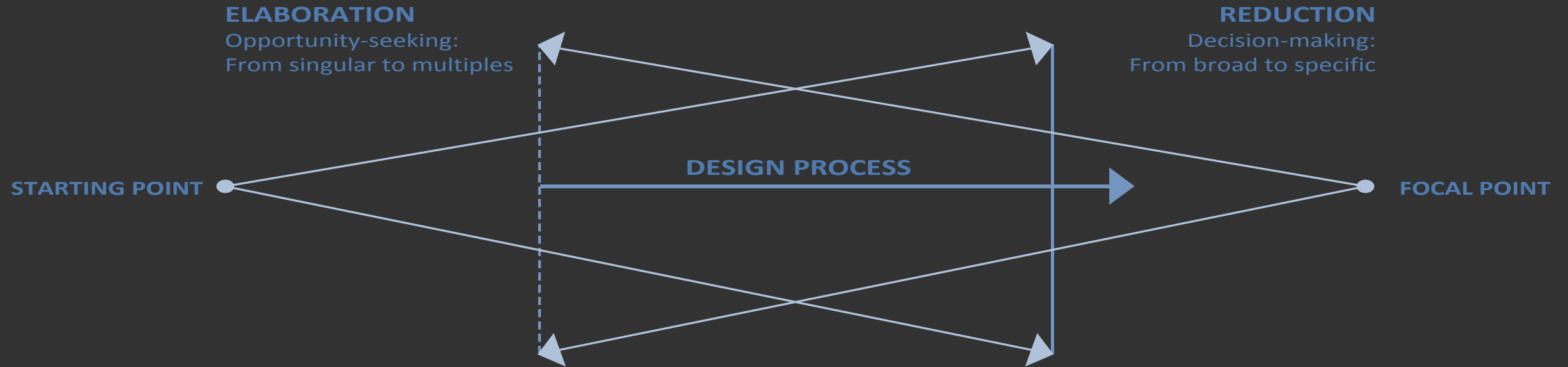








Laseau's Funnel





1.

you can't know the tiger
until you live in the jungle

Living with Windows



2.

gather deep user evidence

1.2 billion

DATA SESSIONS COLLECTED

1.8 million

SESSIONS PER DAY

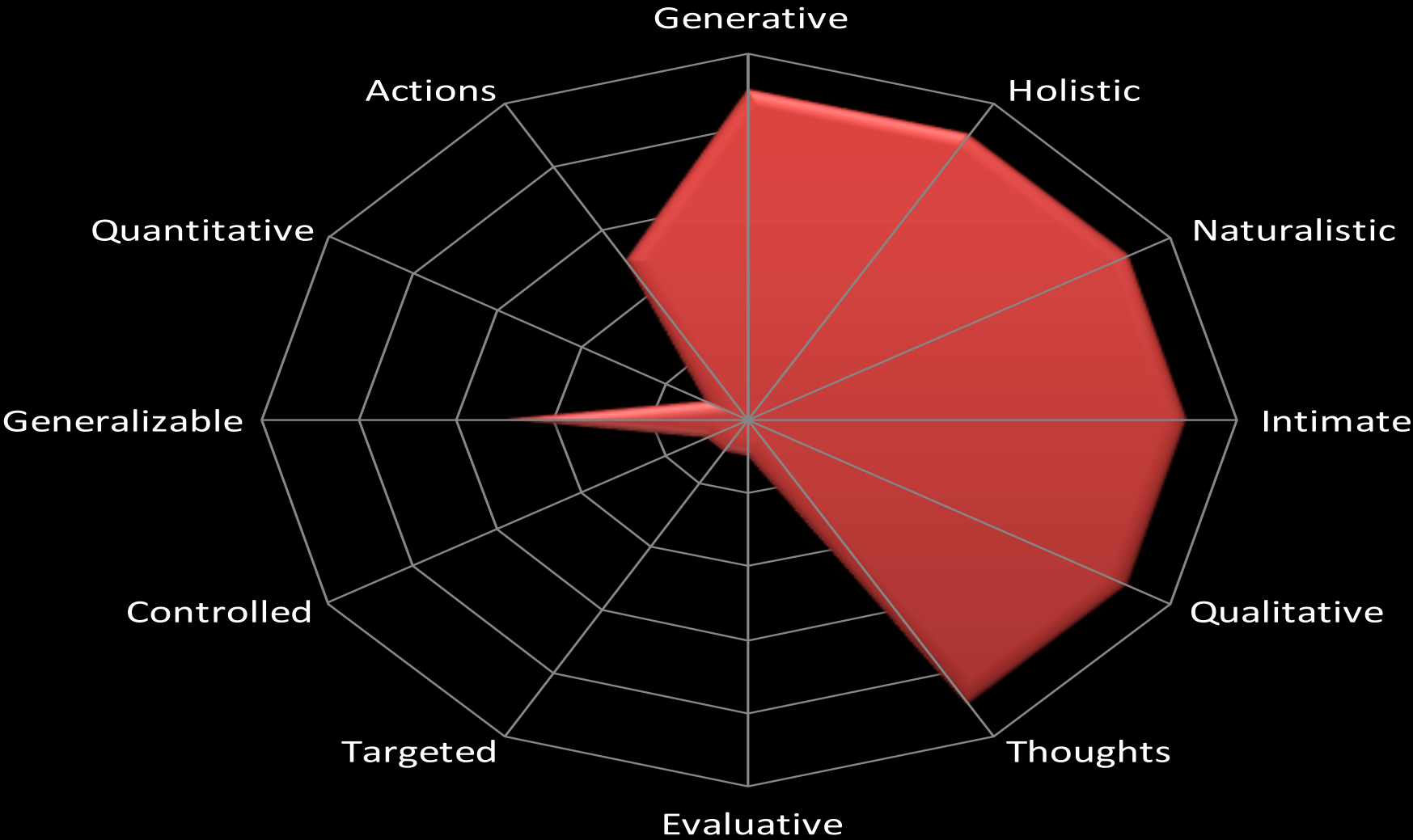
352 million

COMMAND BAR CLICKS (90 DAYS)

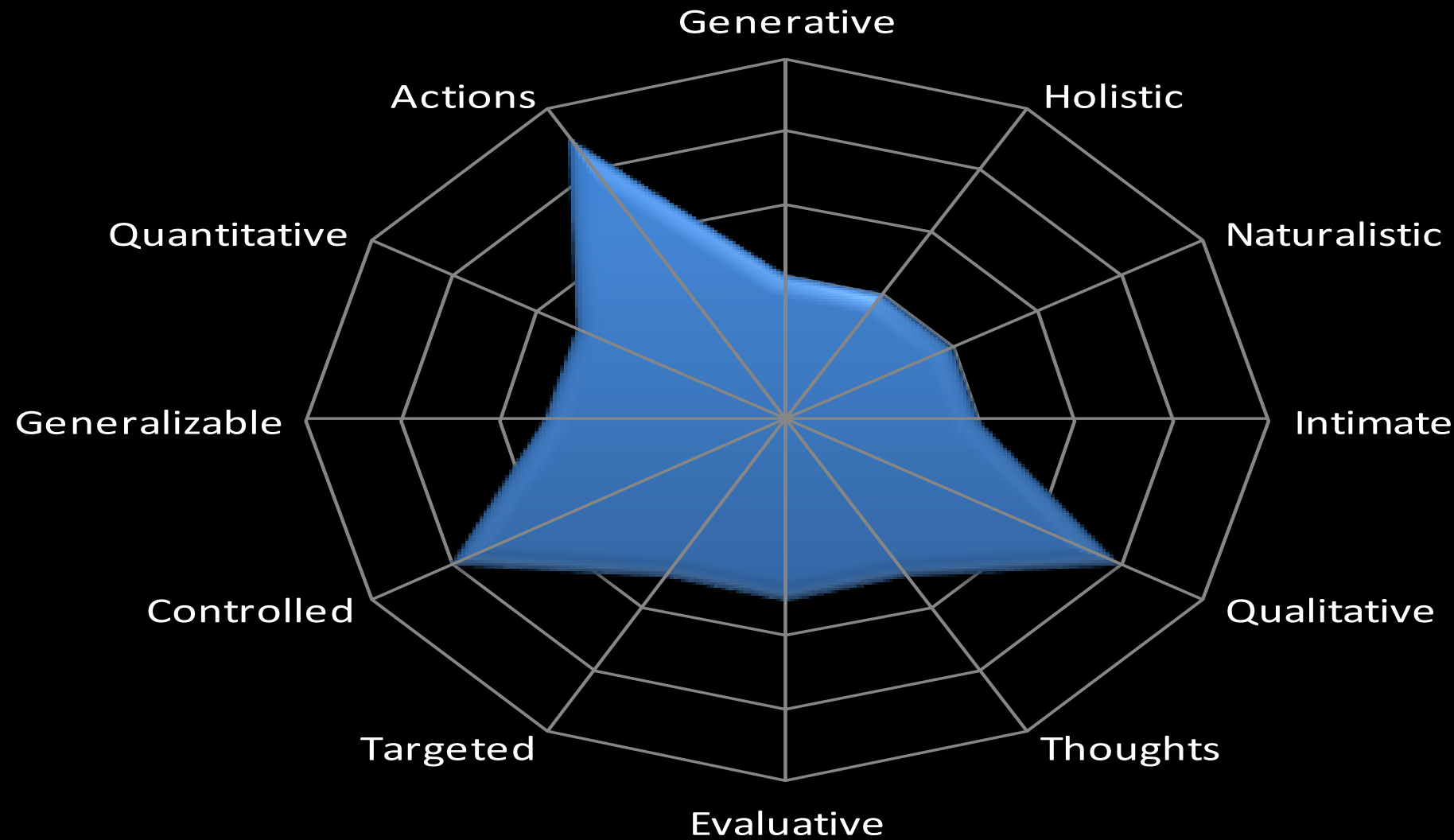
3.

understand intimacy & scale

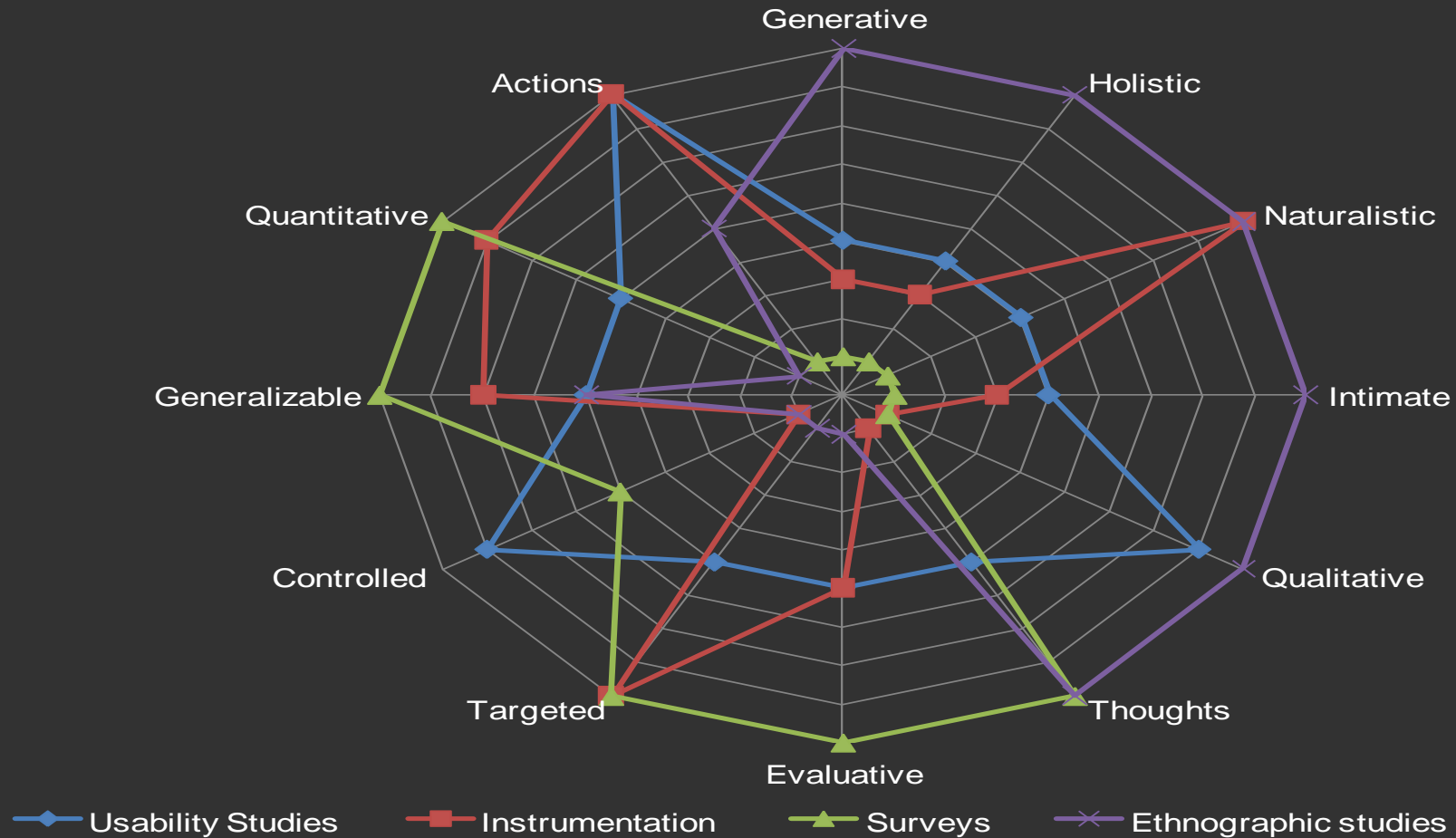
Classic ethnographic research

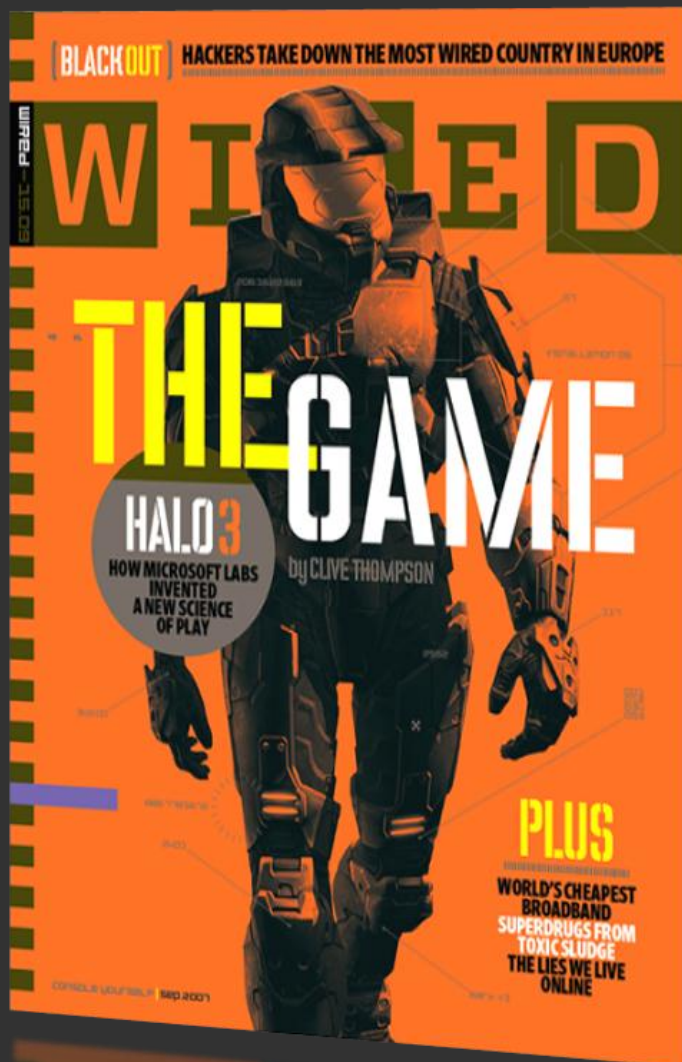


Classic behavioral research



Scaled Intimacy





4.

create rich
evocative models



425-887-8800

November 14, 2005

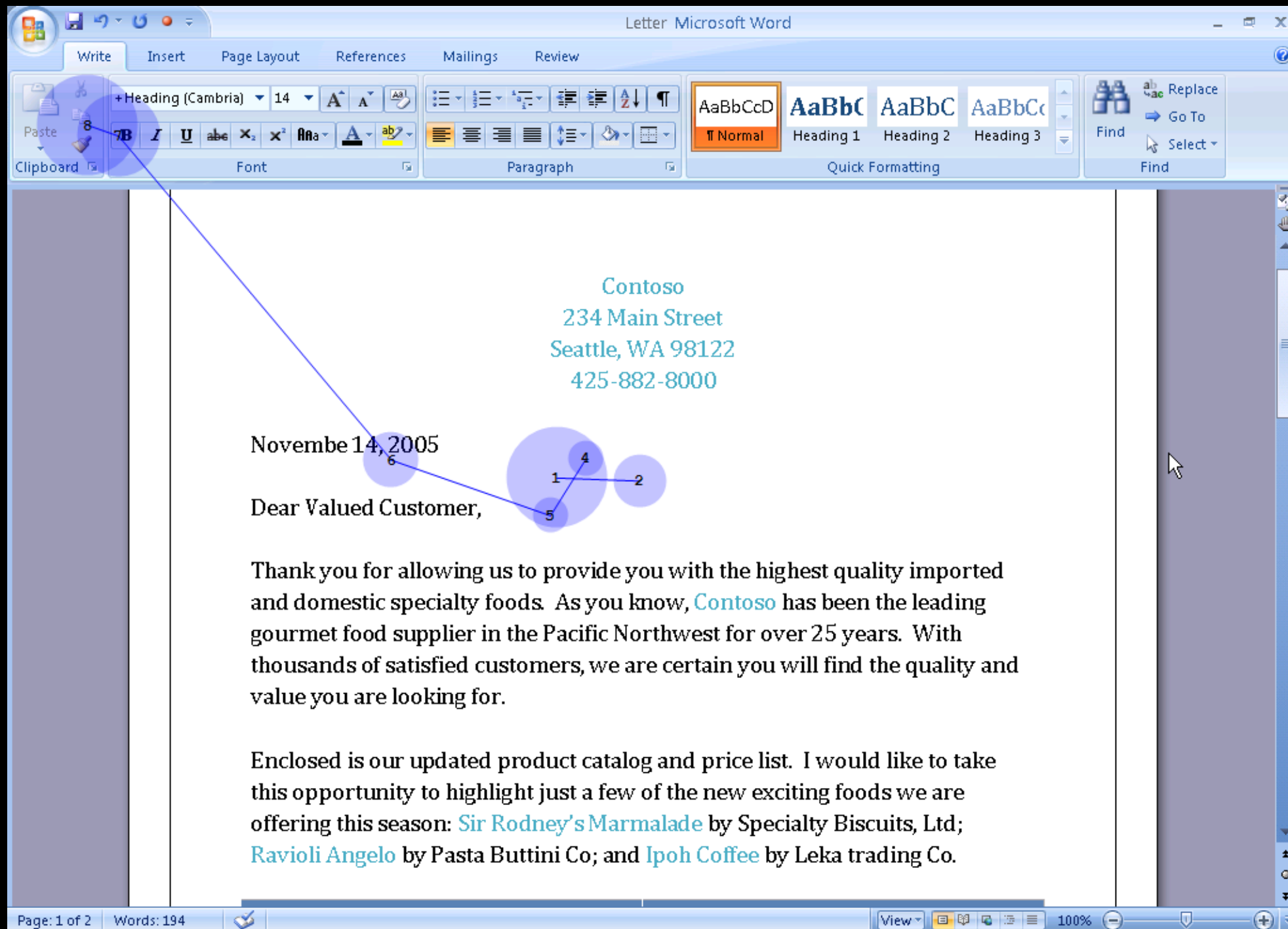
Dear Valued Customer,

Thank you for allowing us to provide you with the highest quality imported and domestic specialty foods. As you know, Contoso has been the leading gourmet food supplier in the Pacific Northwest for over 25 years. With thousands of satisfied customers, we are certain you will find the quality and value you are looking for.

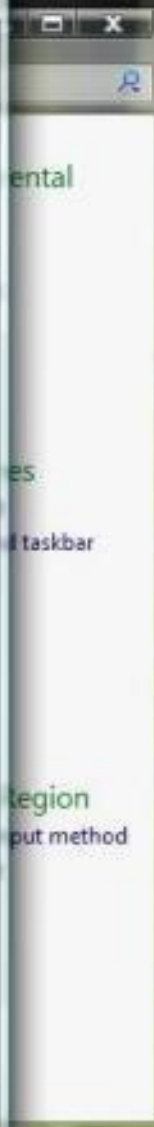
Enclosed is our updated product catalog and price list. I would like to take this opportunity to highlight just a few of the new exciting foods we are offering this season:

Product	Company
Sir Rodney's Marmalade	Specialty Biscuits, Ltd
Ravioli Angelo	Pasta Buttini Co
Ipoh Coffee	Ieka trading Co.

We are proud to offer you a wide selection of products from around the world. Our highly trained staff is constantly searching for premium products at the best prices.



5.
build virtuous
feedback loops



6. co-creation

HOME

YOUR DASHBOARD

CONNECTION DIRECTORY

Search

GO



What's Connect?

This site is a connection point between you and Microsoft, and ultimately the larger community. Your feedback enables Microsoft to make software and services the best that they can be, and you can learn about and contribute to exciting projects. [Learn more.](#)

Sign In

You are already signed in. [Go to your Dashboard](#)

Were you invited to join Connect?

Go

What others are saying about Connect

"That's the bug I posted to Connect; they fixed it! Thanks to the OneNote team for really listening."
- OneNote customer

"I never thought I'd actually communicate with a developer, until it happened."
- Jim B.

"By the way, Connect, thanks a lot for listening to your customers."
- Craig T.

JOIN A CONNECTION - *and try out new products*

[SEE ALL CONNECTIONS >>](#)**Design :** [Live Mesh Beta](#)**Server :** [Parallel Extensions to the .NET Framework](#)**Server :** [SQL Server](#)

REPORT BUGS - *like this one*

[SEE SIMILAR BUGS >>](#)

Rating:
4.9 after
65 ratings

Licenses.licx always checks out when modifying a form

From Connection: Visual Studio and .NET Framework - English

We have a problem with multiple developers working on a windows form project in Visual Studio 2005. Everytime you make any change to the Interface, even if it is just moving a control on a form, the I...

Updated 11 weeks ago | Closed (fixed) | 65 ratings | 32 validations | 3 workarounds | 11 comments

SUGGEST FEATURES - *like this one*

[SEE SIMILAR SUGGESTIONS >>](#)

Rating:
4.9 after
14 ratings

Add support for multi-subnet clusters

From Connection: SQL Server

SQL 2008 should add support for clusters with nodes running on different subnets. Lack of support is a huge blow to the mulit-site clustering community as SQL is probably the number 1 clustered applic...

Updated 1 week ago | Active | 14 ratings | 5 validations | 2 workarounds | 3 comments



7.

validate with user data
lead with design

start

more music



Movies

Television

Music + Radio

music library



playlist



search



radio



Help + Settings

Spotlight

music library

▶ play all

albums by year

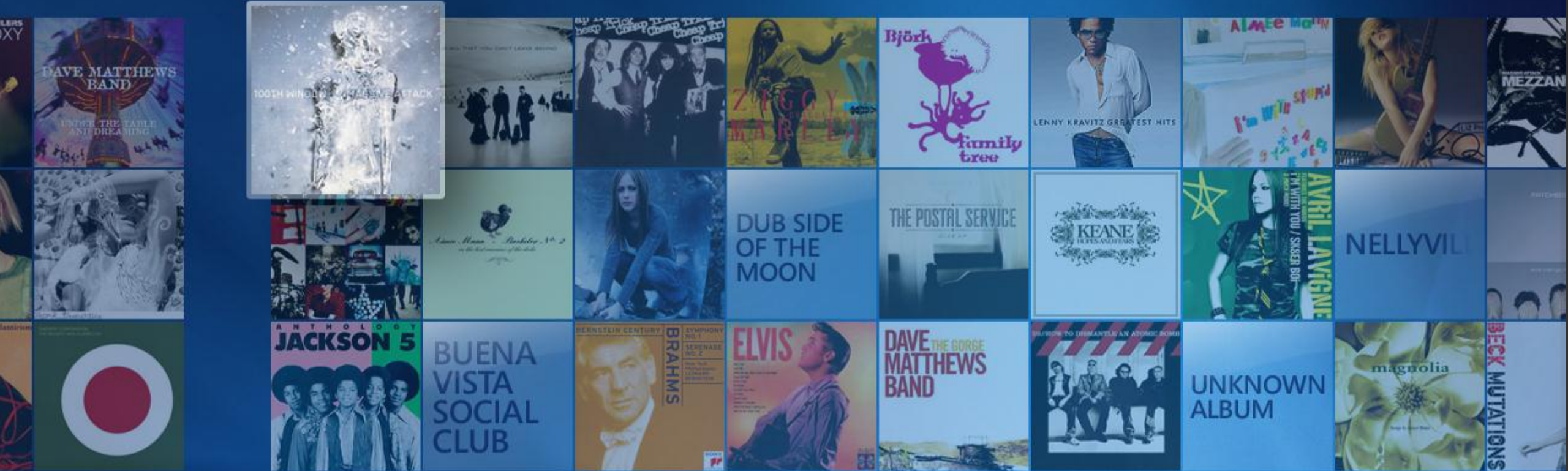
< **albums by title**

> albums by artist

artists

songs

genre



100th Window

Massive Attack

9 tracks 72:36 2002

8.
fail fast

PRODUCT PRESENTATION

SUGGESTED PRODUCTS/SALE

YP BP Yell.com 118 CLAS COVERAGE

PRODUCT DESCRIPTION

KEY FACTS/
POWER STATS

•
•
•
•
•
•

HINTS/TIPS

•
•
•
•
•
•

FEATURES

BENEFITS

OBJECTION HANDLING
TO PRODUCT

SPECIFIC

RELATED STORIES

STATS

PROVEN
VALUE

AD WATCH

AD TRACK

Testimonials

CLASSIFICATION

AREA

PRODUCT

TESTIMONIAL 1

TESTIMONIAL 2

TESTIMONIAL 3

TESTIMONIAL DETAIL

"

"

9.

invent new
paradigms







Rye Rye
influenced by Mos Def



Mos Def



MOS
DEF
QUIET
DOG

Life In Marvelous Times

01:20

2:22

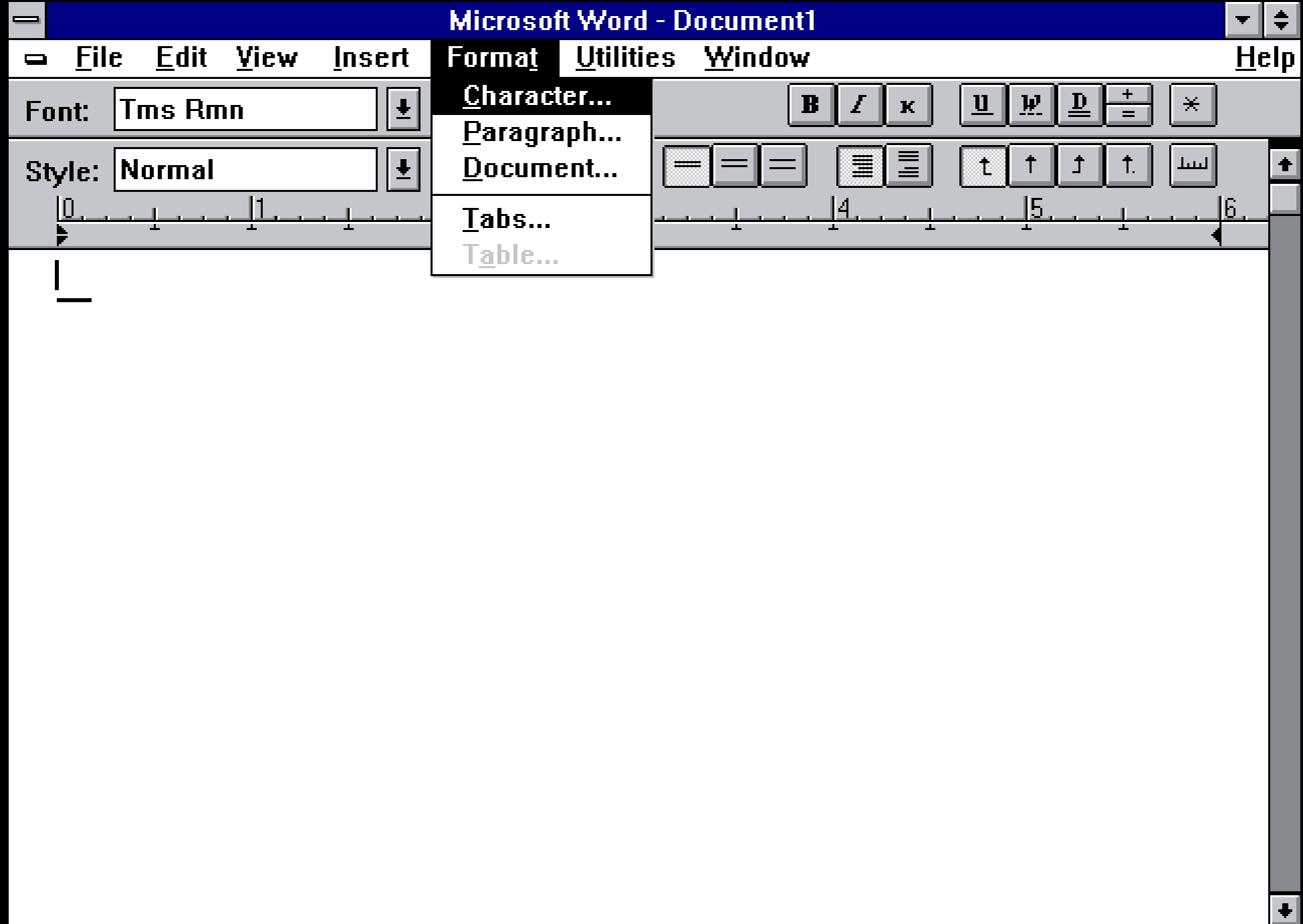


VOLUME 07



10.

simplicity is hard
but worth striving for



Changes the appearance of the selected characters

Document1 - Microsoft Word

File Edit View Insert Format Tools Table Window Help

Type a question for help

100% Read

Table Columns Times New Roman 10 B I U

<Click Recount to view> Recount

1 2 3 4

Value1	Value2	Value3	Value4

1 2 3

Draw AutoShapes

Page 1 Sec 1 1/1 At 1.1" Ln 2 Col 1 REC TRK EXT OVR

Search Results

30 results from Office Online

- Update an index, table of contents, table of figures, or table of authorities
Help > Tables of Contents, Index, and Tables of Figures
- Change the appearance of a table of contents, index, table of authorities, or table of figures
Help > Tables of Contents, Index, and Tables of Figures
- Delete an index, table of authorities, or table of figures
Help > Tables of Contents, Index, and Tables of Figures
- Split a table
Help > Tables
- Table of Contents II: Advanced TOCs, long documents, and other tables
Training > Word

Search

Microsoft Office Online

tables

Can't find it?

Change the appearance of a table of contents, index, table of authorities, or table of figures

- Show All
- On the **Insert** menu, point to **Reference**, click **Index and Tables**, and then click the tab you want.
 - In the **Formats** box, click **From template**, and then click **Modify**.
 - In the **Styles** box, click the style you want to change, and then click **Modify**.
 - To add the new style definition to your template, select the **Add to template** check box.
 - Under **Formatting**, select the options you want.

Notes

- To change the appearance of a table of contents in a **Web frame**, you must first position the insertion point inside the frame that contains the table of contents. To change the appearance of a table of contents in a **Web frame** that uses **hyperlinks**, change the properties of the hyperlink style.
- To edit the text of an individual entry, locate the source of the entry, modify it, and then update the entire table of contents, index, table of authorities, or table of figures.

Please let us know if this content was helpful.

Rate this content:
★★★★★

Tell us why you rated the content this way (optional):

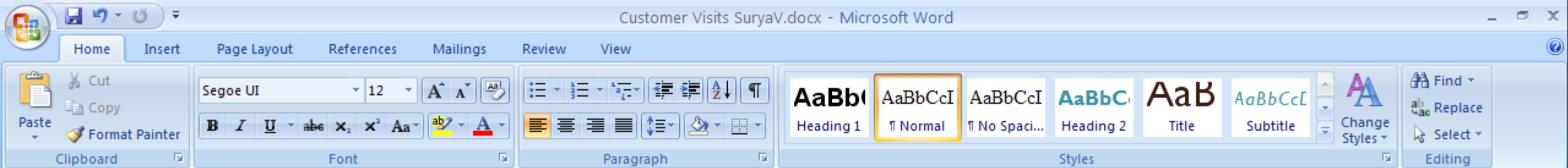
Remaining characters: 650

Submit

Contact Us
Privacy Statement

find and use

use and find

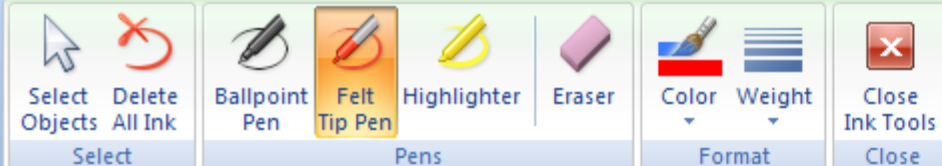


Why Use this Methodology?

Most Usability Engineers who conduct site visits use the Contextual Design methodology, or some ethnographic/anthropological method. These methodologies combine a combination of visiting users in their work environments, capturing data, creating “models” of users and their environments, and then translating those models into design specifications.

However, in practice, most of these efforts lose steam after the site visit phase of the process is finished. Copious work may be put into creating models of the users and their work environments; however, this work usually ends up being done by a lone usability engineer, and perhaps a sympathetic developer. Generally, by the time the models are done, they are never actually turned directly into specifications; often the product team has even left the initial specification stage before the modeling is even complete.

Moreover, the final step of producing a report and pushing the results is often lost on



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Moreover, the final step of producing a report and pushing the results is often lost on

11.

never sacrifice clarity
for depth





MEMORY

MUSIC

XBOX LIVE

SETTINGS

 SELECT

12.
experience
can be measured



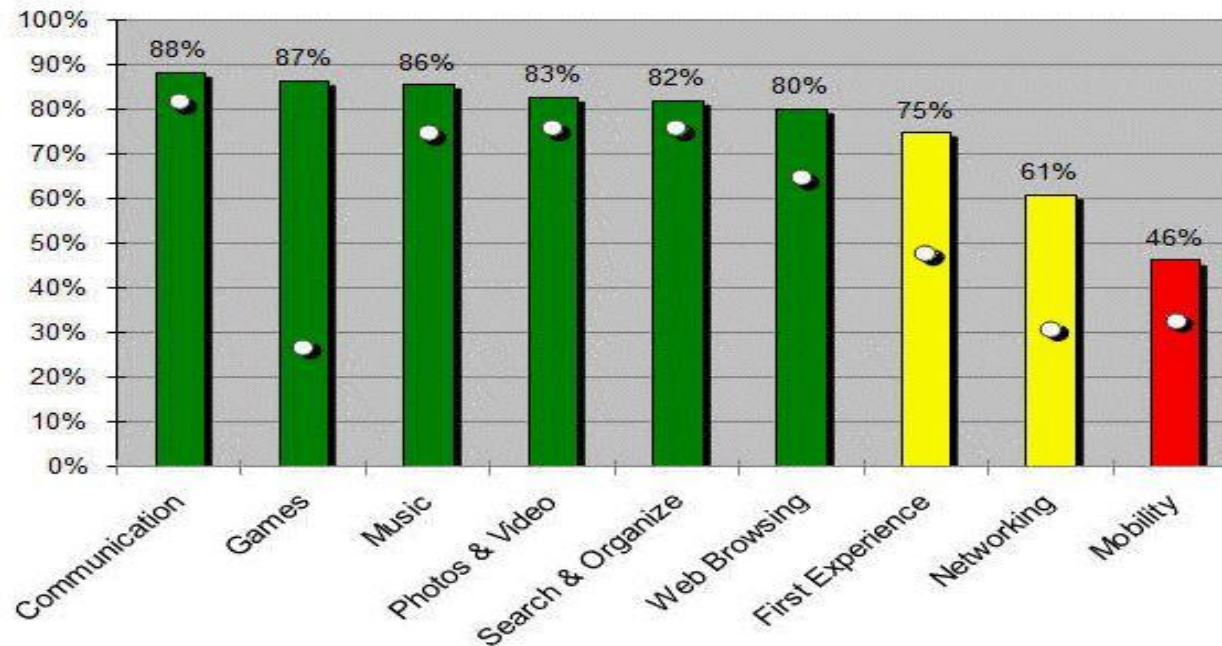
Windows Vista Client Usability

78% Task Success
100% RC1 Exit Criteria Met ☒

Last Updated: 10.11.2006

The UX Portal showcases real data from real Windows Vista users. Current Usability Health Scores, which represent the state of key end-user Experiences, are based on usability evaluations of recent Windows Vista builds. By drilling into an Experience, you can see more detail on bugs and issues that have been filed to track improvements. [Learn more](#) about how tasks are chosen, evaluated, tracked, & improved.

Task Success by Experience Area



Home

Experiences

[First Experience](#)
[Search & Organize](#)
[Photos & Video](#)
[Music](#)
[Mobility](#)
[Web Browsing](#)
[Communication](#)
[Games](#)

Projects

[Living with Windows Vista](#)
[Desirability](#)
[Home Networking](#)
[Discoverability](#)

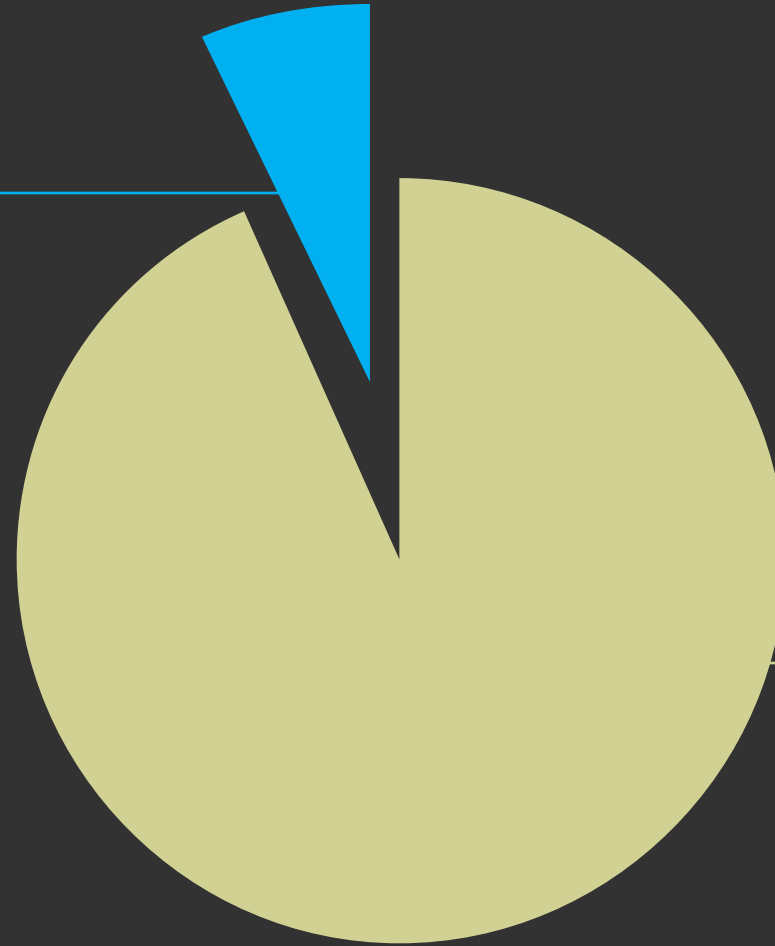
Bug Queries

[All Usability Basic blocking bugs](#)
[All usability bugs](#)

Related Sites

[UX Status](#)
[Usability Basic](#)
[Fit & Finish](#)
[MSX Design](#)

designers



engineers



Design
Hero



Team
Hero

wireframes

envision boldly

genius > coach

design thinking

keeping the problem alive

give it away

ego / no ego

deferring judgment

doing > facilitating

open it up

prototyping

courage + conviction
mapping

release team creativity

creative thinking spaces

diagram

macro + micro

design charettes

storytelling

fail fast

raise design IQ

innovation in the design of the culture
can be far more impactful than just
innovation of products and services

“Business people don’t just need to understand designers better – they need to become designers”

- Roger Martin

Relationships and Roles for Design in the Organization



**resource
to organization**



**part of
organizational
system**



**core to
organization**



**design is the
organization**

“If you’re not busy being born,
you’re busy dying.”



Thanks.

The Microsoft logo, featuring the word "Microsoft" in a bold, italicized, sans-serif font. The "M" is particularly large and stylized, with a registered trademark symbol (®) to its upper right.

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