1.0 Interaction Design

WHAT IS IT?

Interaction design is the design of interactive products and systems to support the way people communicate and interact in their everyday lives.

**Interaction design is an umbrella term
for all aspects of what is being designed:**

User Interface Design (UI)
Software Design
Product Design
User Experience Design
Web Design

It's about the big picture, a holistic approach to problem solving.

Interaction design is fundamental to all disciplines, fields, and approaches that are concerned with researching and designing interactive products and systems for people.

DESIGNism #1

NOTHING IS USEFUL, IF WE DON'T KNOW HOW TO USE IT.

Interaction design exists because people need intuitive systems to help learn, perform tasks, and navigate through new and existing content, technology, and spaces.

We are aiming to improve communication between people and their environment.

Smartphones / handheld devices
Toys / games
Remote controls
Household technology
Mobile applications / software
Websites
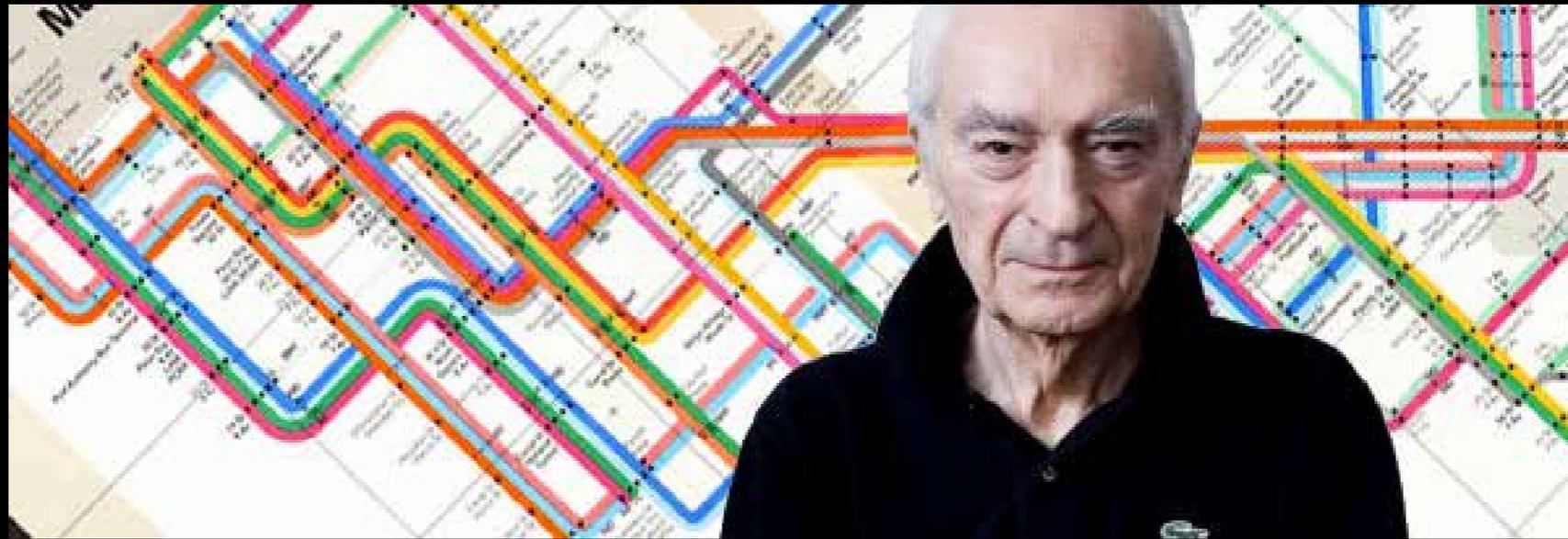Robotics

Airport / mall kiosks
Restaurants / stores
Exhibition graphics
Signage / wayfinding / navigation
Theme parks

**BILL & MELINDA GATES FOUNDATION
SEATTLE, WA**

**MASSIMO VIGNELLI
NYC SUBWAY MAP, 1972**

User-centered design is a philosophy and a process in which the needs, wants and limitations of end users (of a product or system) are given extensive attention at each stage of the design process.

Who is this product for?
Why would they use it?
How will they use it?

USABILITY

Ensure that interactive products are easy to learn, effective to use, and enjoyable from the user's perspective. "Can I use it?"

USABILITY GOALS

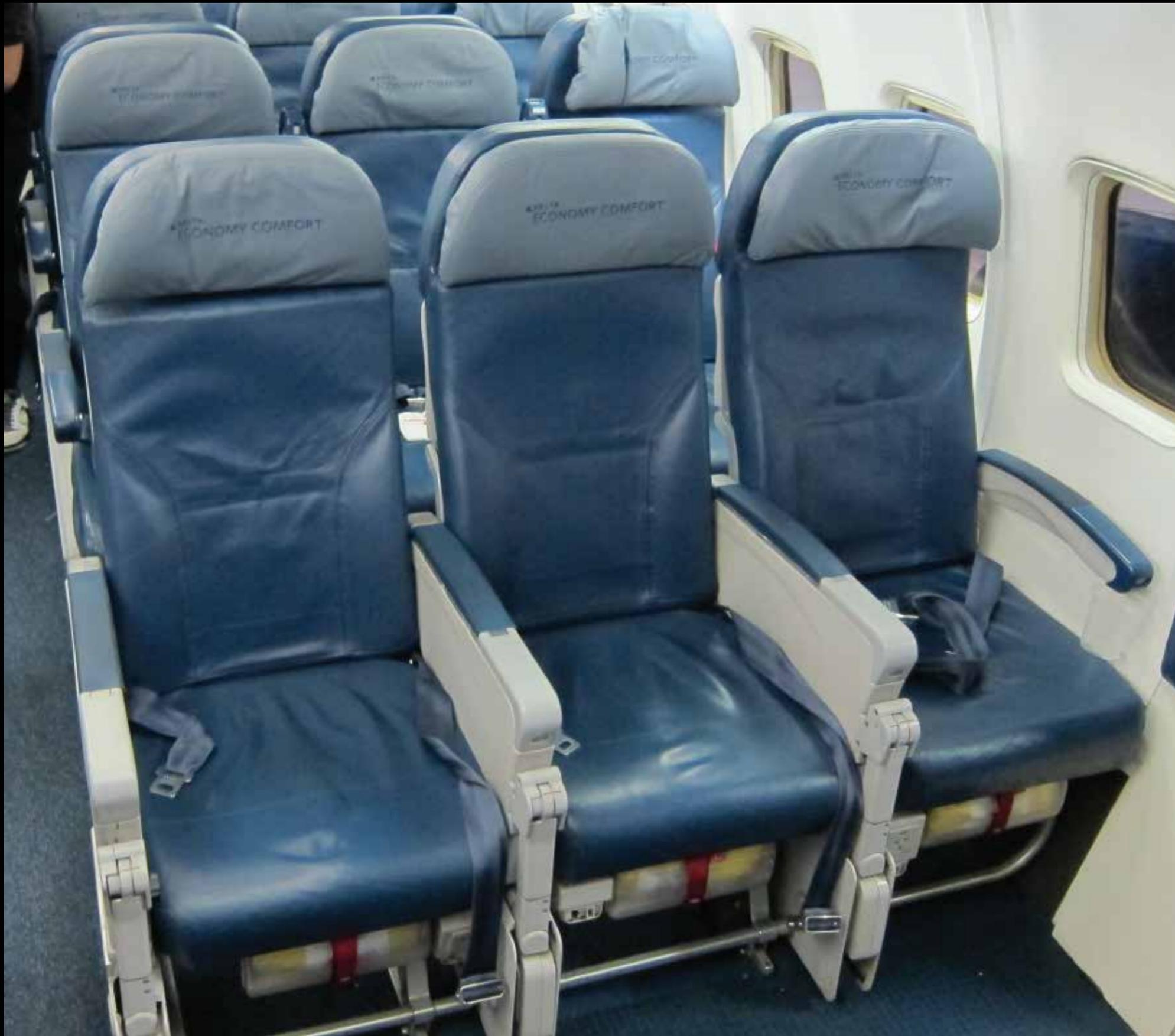effective, efficient, safe, utility, learnability, memorability

The user experience is how people feel about the product and their pleasure and satisfaction when using it. "Do I want to use it?"

UX GOALS

satisfaction, enjoyable, engaging, entertaining, motivating, challenging, rewarding, helpful

There are four main types of interactions. Understanding which interaction type to use helps designers choose which interface and behaviors to implement.

INSTRUCTING

tell time
print a files
reminders
word processing

MANIPULATING

toys / games
zooming
moving
selecting

CONVERSING

search engines
banking
ticket booking
help centers

EXPLORING

virtual tours
location-detection
technology

DESIGNism #2

GOOD DESIGN REDUCES THE NEGATIVE ASPECTS WHILE ENHANCING THE POSITIVE ONES.

innovative
useful
beautiful
understandable
unobtrusive
honest
long-lasting
thorough / detailed
environmentally friendly
simple

GOOD

simple
easy
clear
minimal
effective
valuable

BAD

complicated
difficult
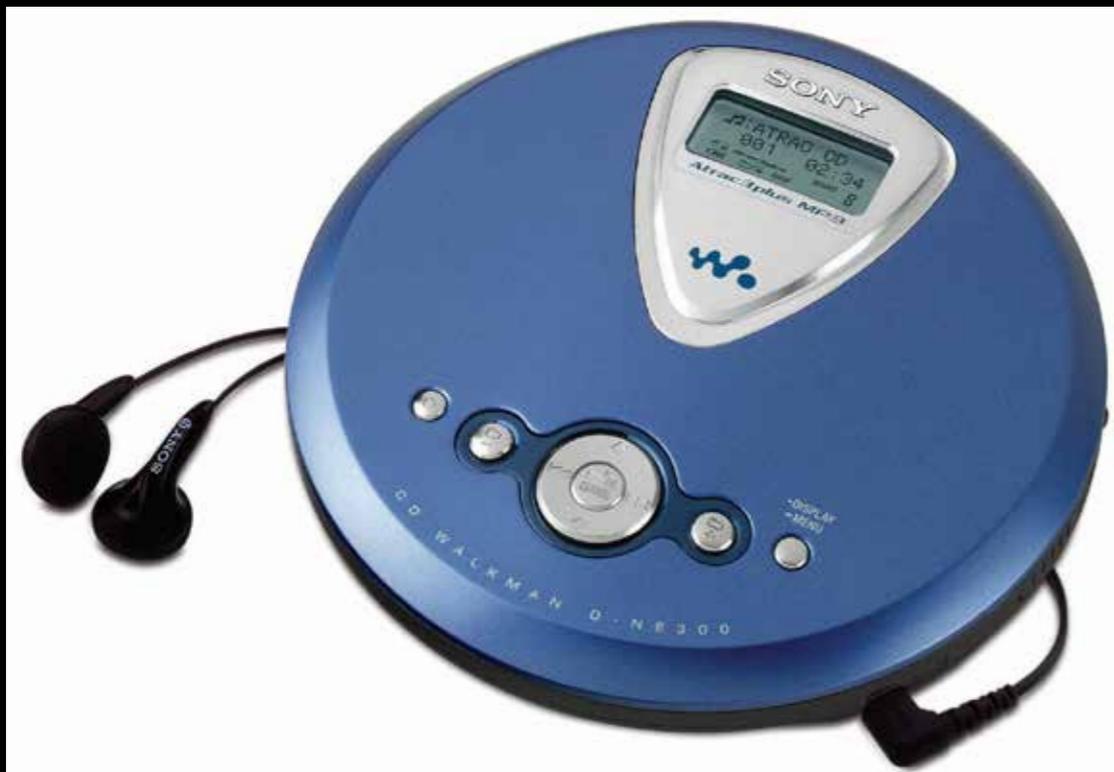confusing
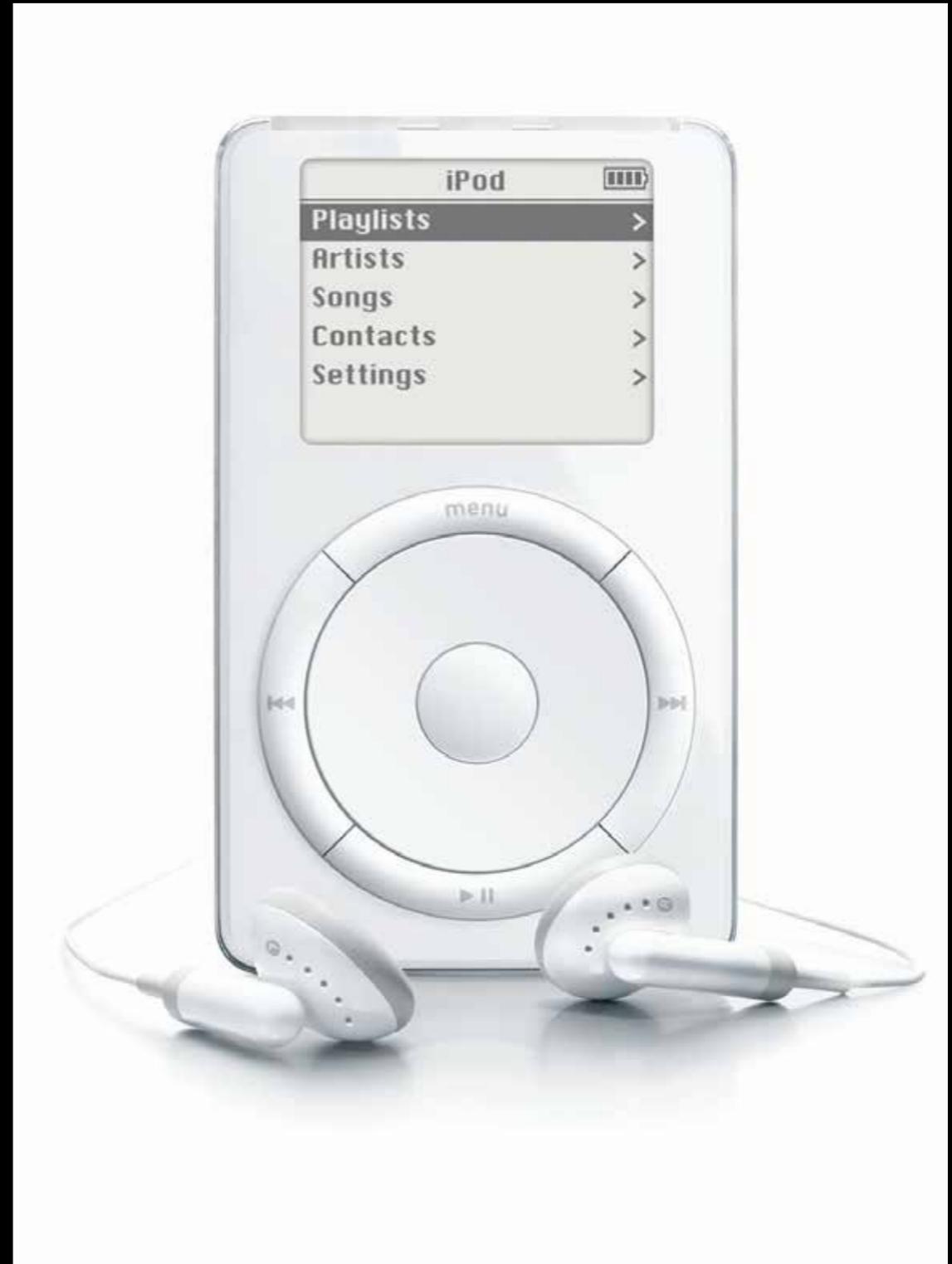cluttered
inconsistent
useless

REVOLUTIONARY or EVOLUTIONARY

Not all products and systems need to be new and original.

Research will determine whether or not you need a revolutionary concept or an evolutionary redesign of the current model.

REVOLUTIONARY or EVOLUTIONARY

Was the first Apple iPod revolutionary or evolutionary?

REVOLUTIONARY or EVOLUTIONARY

Was the first Apple iPod revolutionary or evolutionary?

Why not?

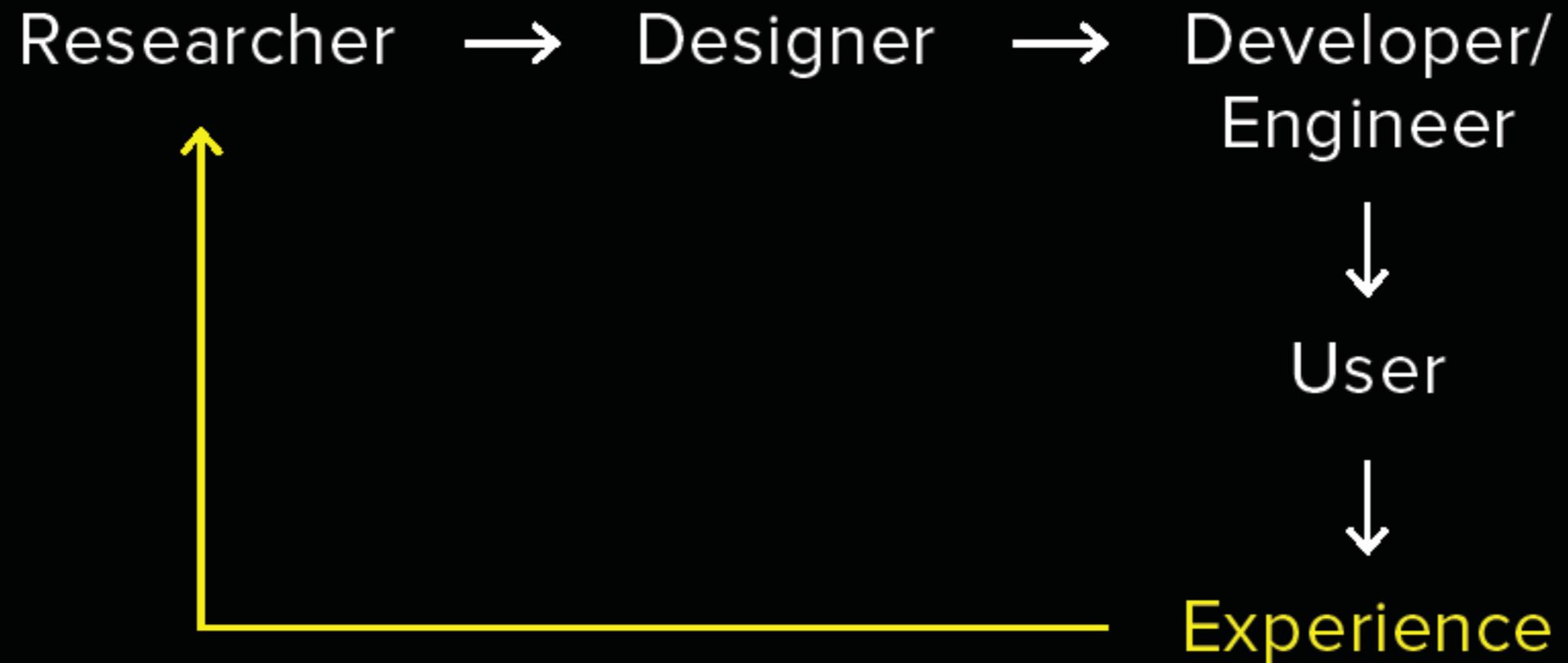Was the first Apple iPod revolutionary or evolutionary?

Why not?

Existing experience: personal music player, with different technology

GRAPHIC DESIGN

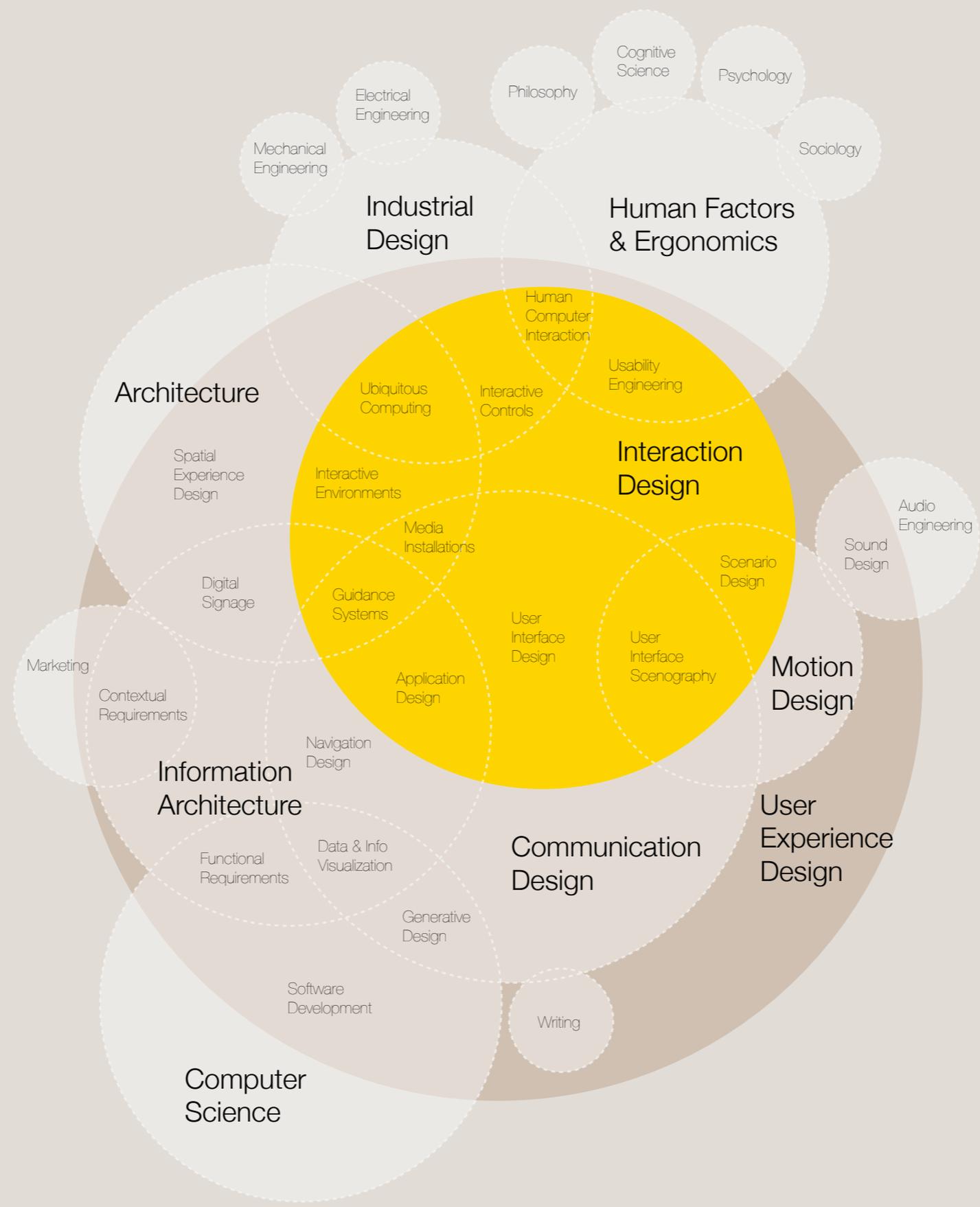Designer → Audience

INTERACTION DESIGN

Researcher → Designer → Developer/Engineer → User → Experience

keyword = team

The design of products and systems is never done by one person.

They are created by teams formed by people from many disciplines.

Electrical Engineering

Mechanical Engineering

Philosophy

Cognitive Science

Psychology

Sociology

Industrial Design

Human Factors & Ergonomics

Architecture

Human Computer Interaction

Usability Engineering

Ubiquitous Computing

Interactive Controls

Spatial Experience Design

Interactive Environments

Interaction Design

Audio Engineering

Sound Design

Media Installations

Scenario Design

Digital Signage

Guidance Systems

User Interface Design

User Interface Scenography

Motion Design

Marketing

Application Design

Contextual Requirements

Navigation Design

Information Architecture

User Experience Design

Data & Info Visualization

Communication Design

Functional Requirements

Generative Design

Software Development

Writing

Computer Science

HUMAN FACTORS / RESEARCH

UX Researcher (UX)
Human Factors (HF)
Psychology
Sociology

ENGINEERING

Computer Science
Engineering
Human-Computer
Interaction (HCI)
Information Architecture (IA)

DESIGN

Visual Design
Product Design
Industrial Design
Environmental Design
Information Design
Animation / motion

BUSINESS

Marketing
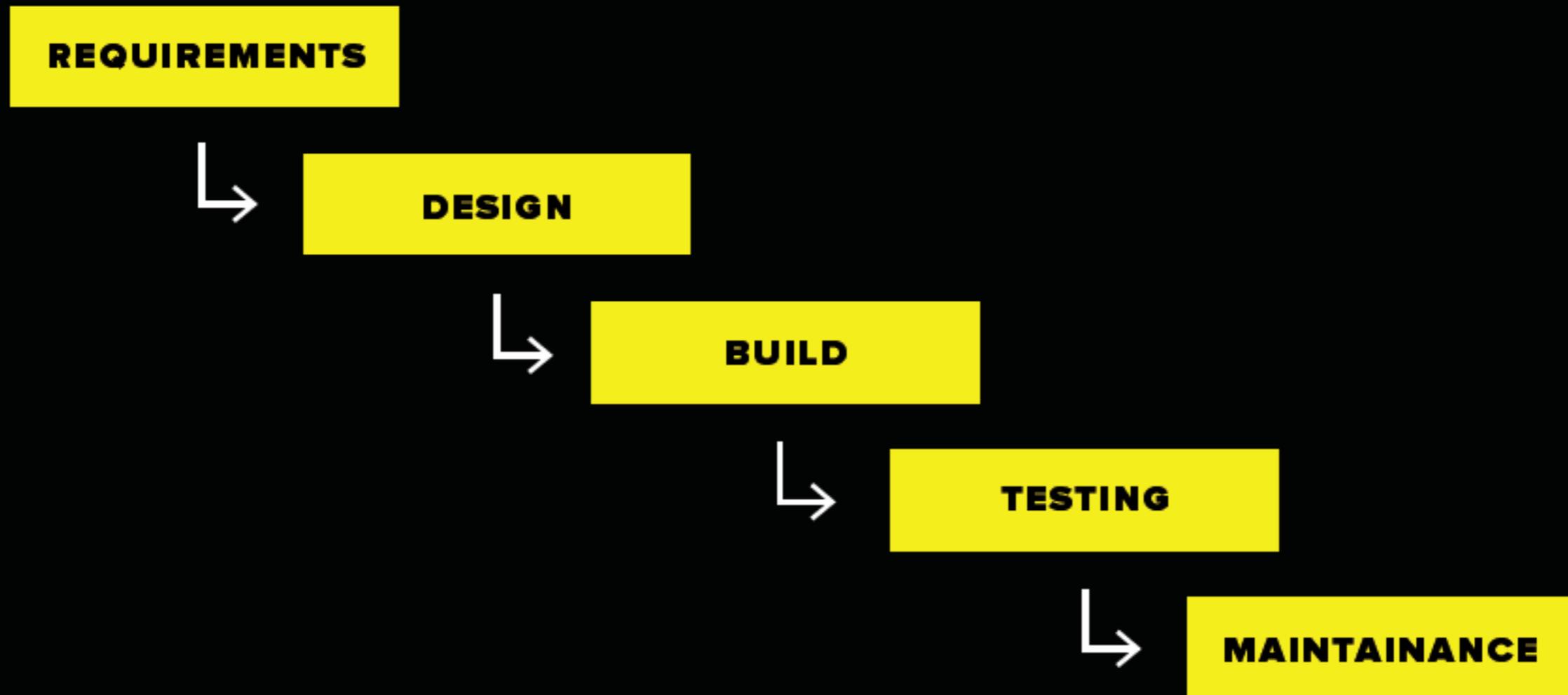Product Development
Content Writing

DEVELOPMENT CYCLE: WATERFALL

REQUIREMENTS

DESIGN

BUILD

TESTING

MAINTAINANCE

DEVELOPMENT CYCLE: ITERATIVE (AGILE or LEAN)

BUILD FASTER

IDEAS → CODE

LEARN FASTER

MEASURE FASTER

DATA
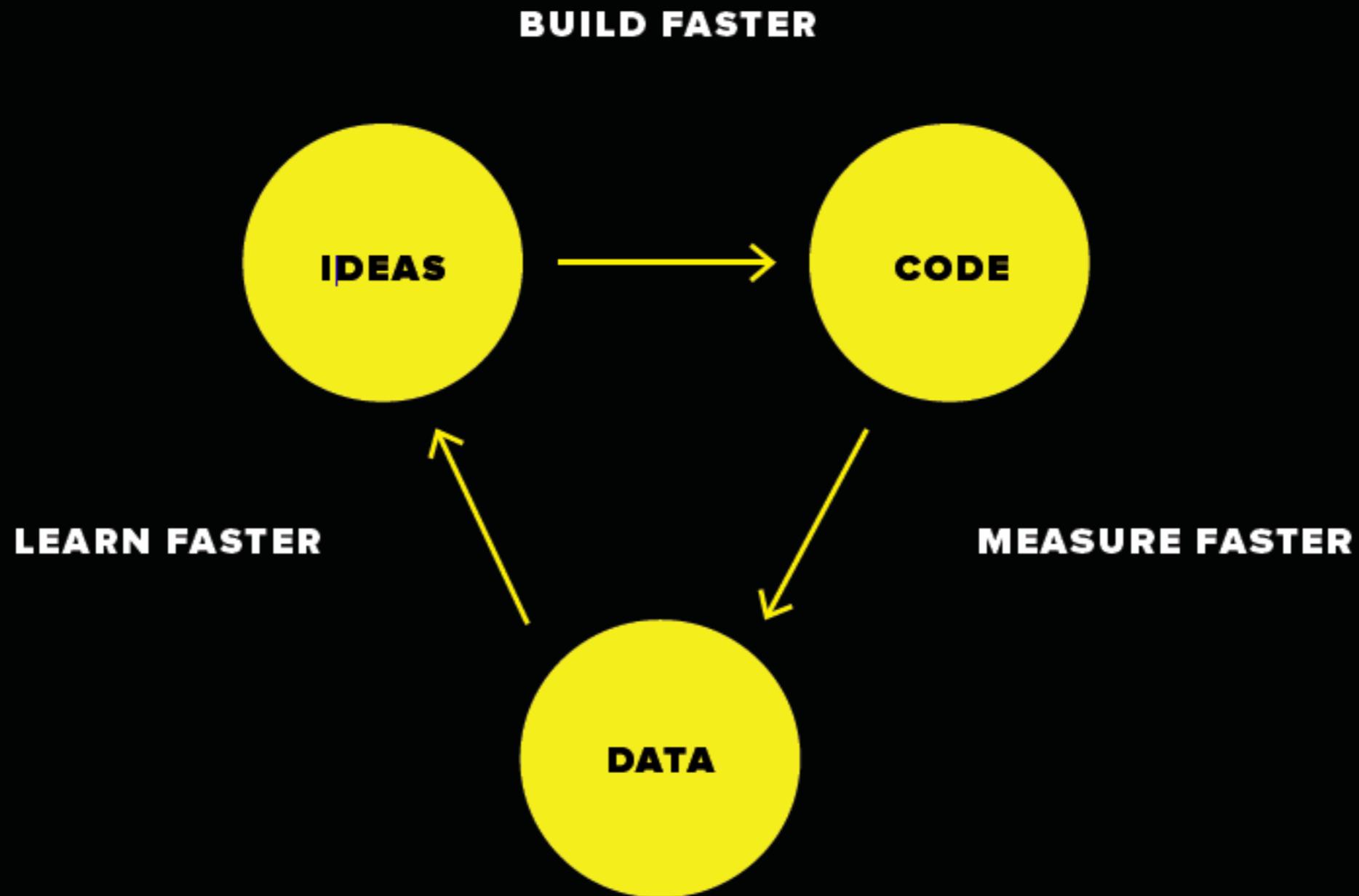
BUILDING

Replace high-level design with frequent redesign.

**ITERATIVE and INCREMENTAL
COLLABORATIVE
ADAPTIVE PLANNING**

LEARNING

Everything not adding value to the customer is waste.

**REDUCES COST
MINIMUM VIABLE PRODUCT
QUICK LAUNCH**

PROCESS

PHASE 1: RESEARCH and REQUIREMENTS
Define problem, content gathering, user research

PHASE 2: PRODUCT DEVELOPMENT and DESIGN
Brainstorming, content integration, design, and system development

PHASE 3: BUILD and IMPLEMENTATION
Visual design, programming, refine product

PHASE 4: TESTING and EVALUATION
Usability testing, revisions, and bug fixes

DESIGNism #3

THE ULTIMATE INSPIRATION IS THE DEADLINE.

-Nolan Bushnell (Kong, Atari, Chuck E. Cheese)