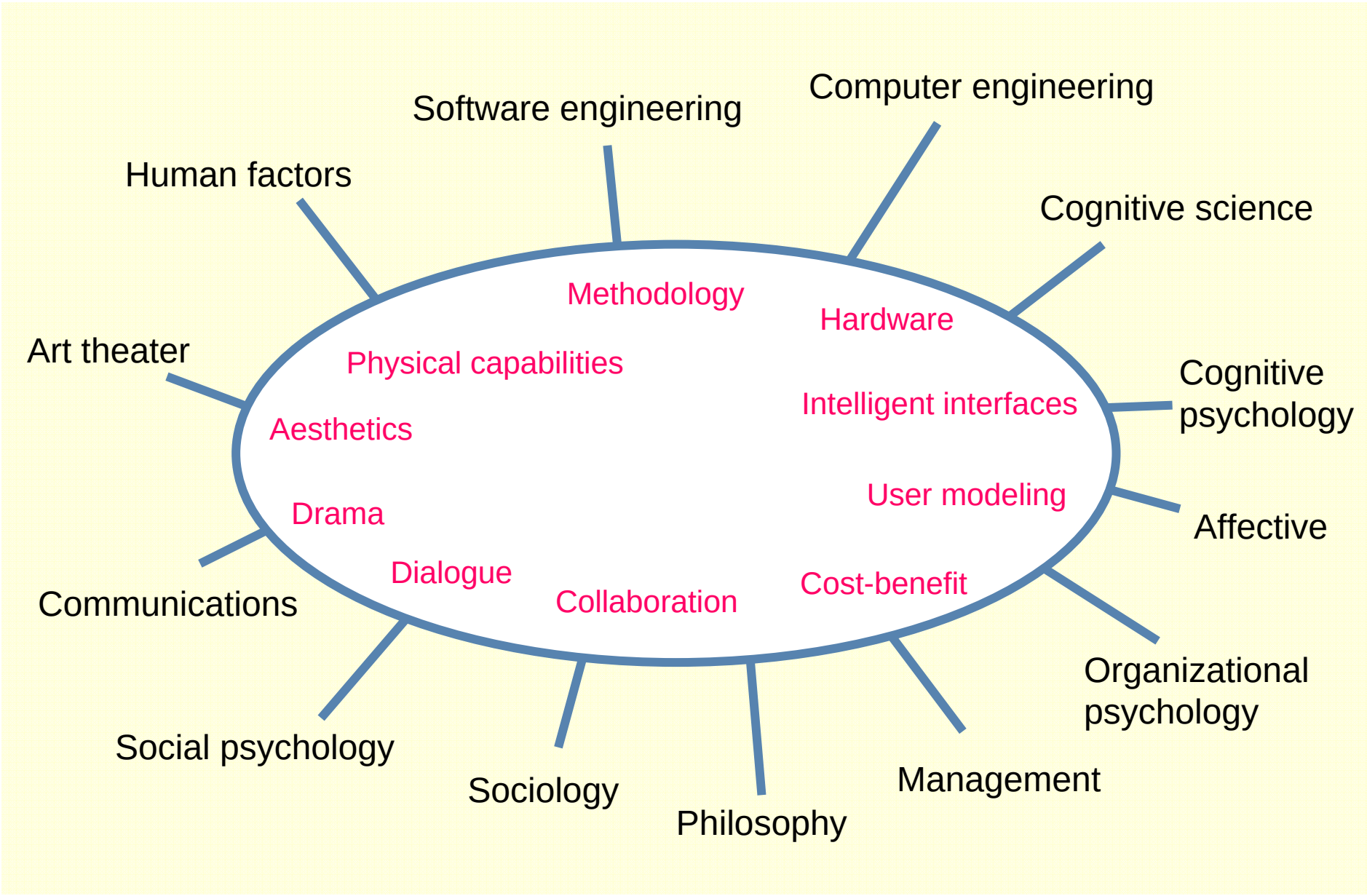
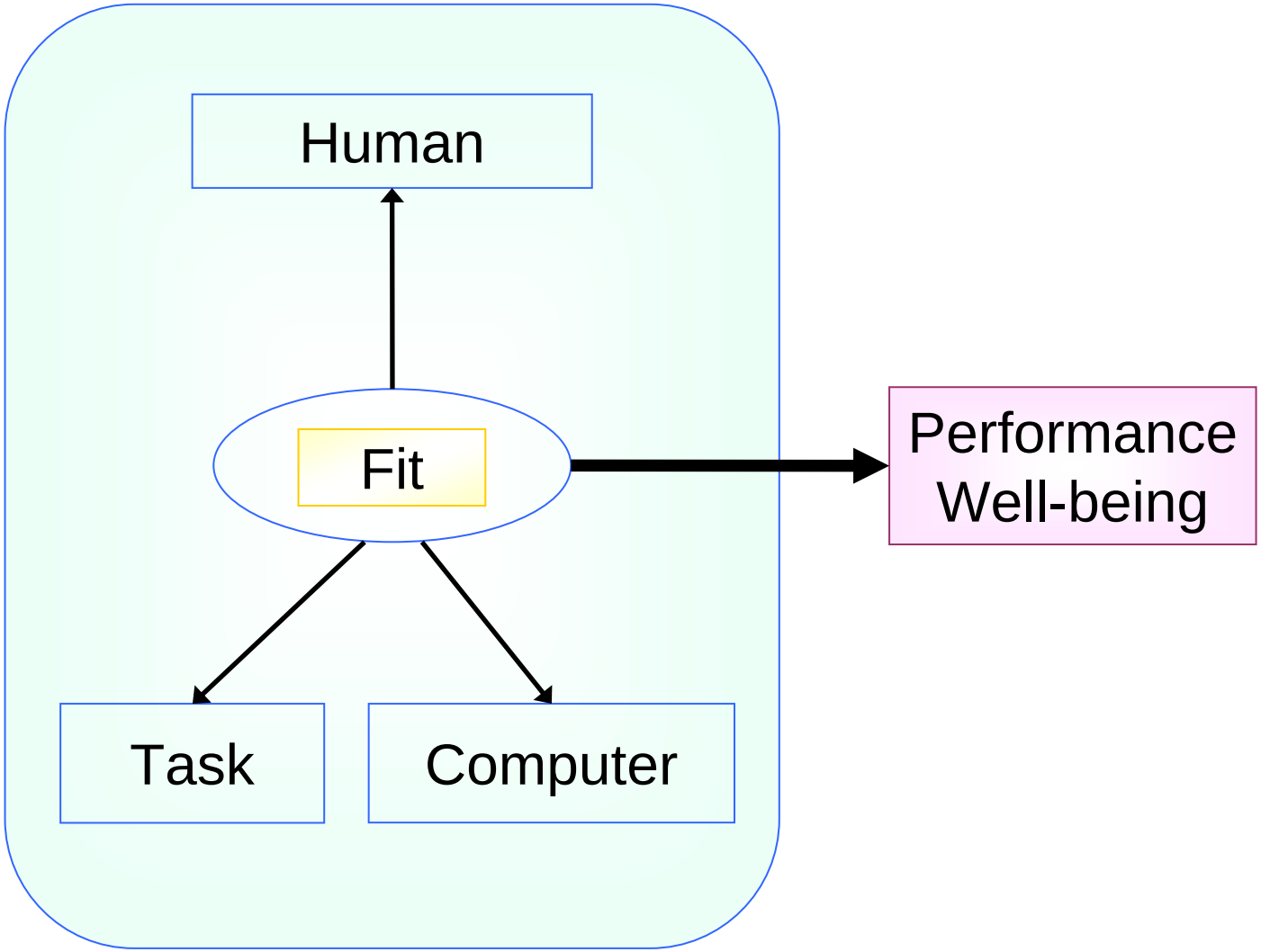
Cartoon depicting the failure of HCI effectiveness.

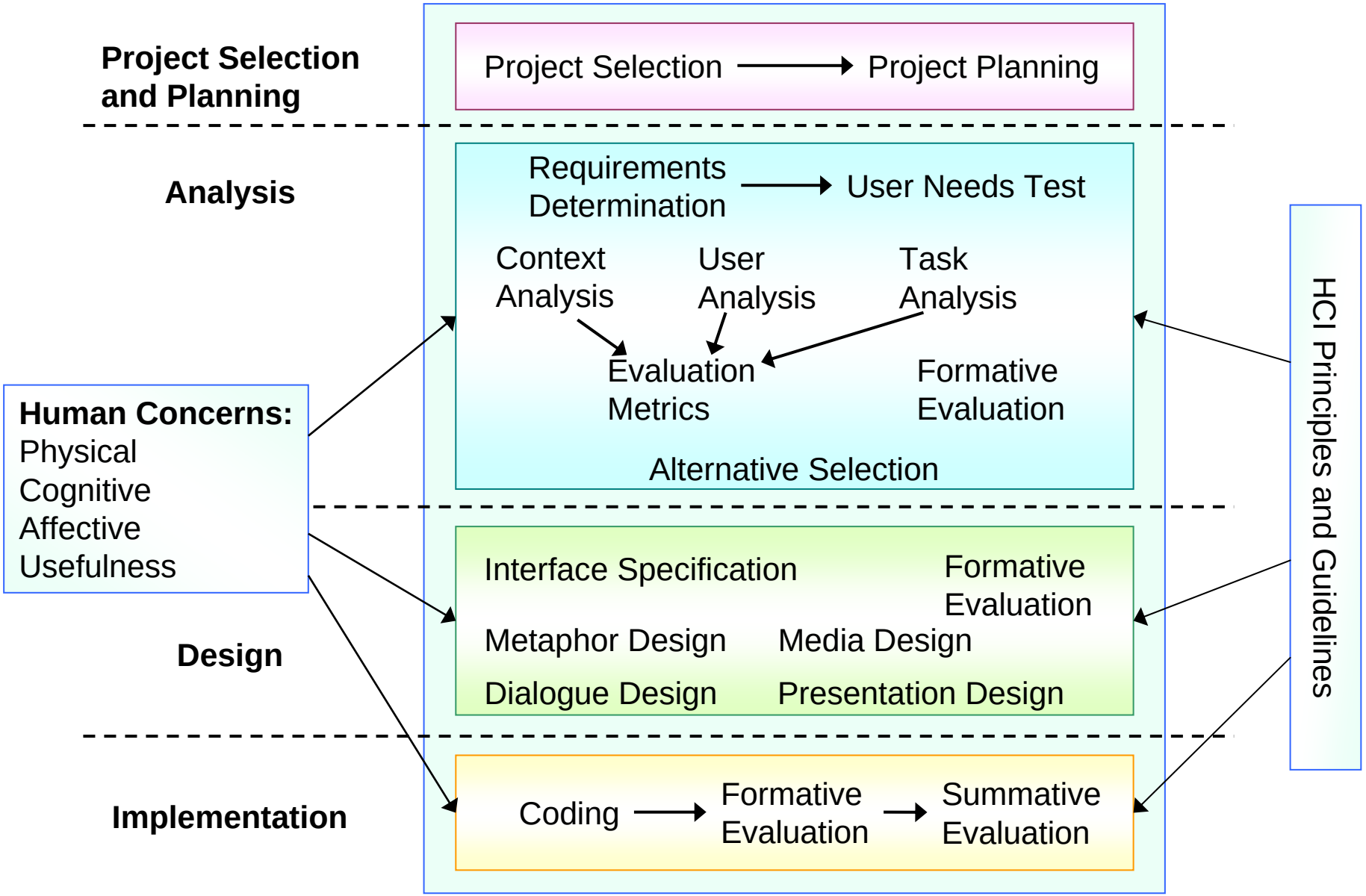
Human-computer interaction is an interdisciplinary field.

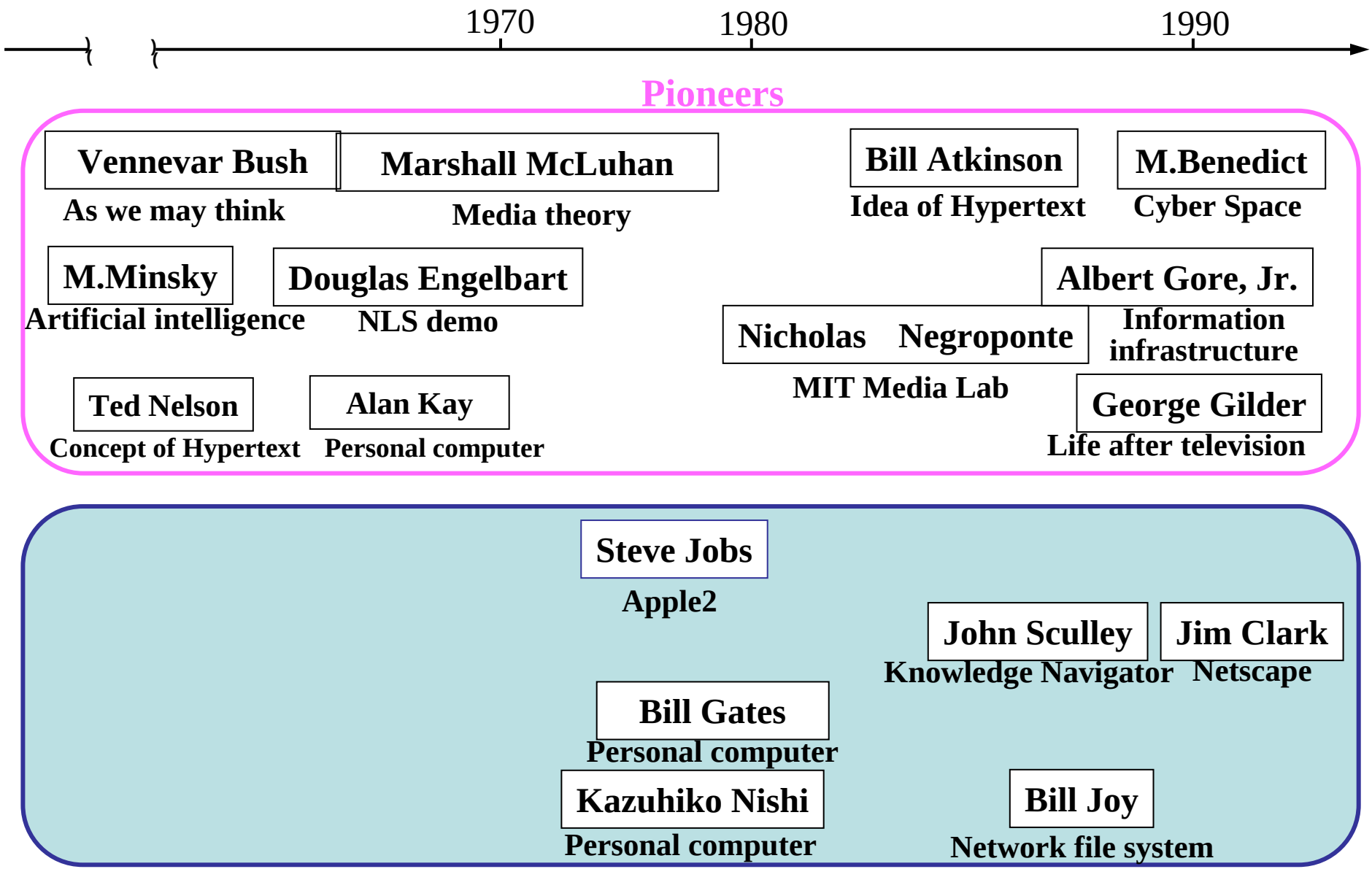


The fit of HCI elements leads to performance and well-being.



The HCI development methodology.





People who contributed to multimedia technology

Stored-program Computer

Idea： Babbage & Lovelace (1842)

Distinct technology development： von Neumann (1946)

EDSAC computer born (1949)

Keyboard （Typewriter）

Sholes & Glidden Typewriter (1866)

Produced by Remington Co. (1873)

QWERTY layout (1878)→International standard (1905)

Dvorak layout (1931)

Hyper-text

Idea of Memex (memory extender) for document retrieval：V. Bush (1945)
← Chief of Research and Development Bureau in U.S.A,
Presidential Scientific Adviser
Framework for augmentation of human thinking（word processor）:
D. Engelbart (1963)

Xanadu（Idea of memo searching system）: T. Nelson (1960)
Introduction of link structure→ Hyper-text, concept of hyper-media (1965)

Network Community

ARPA net (1969) → Internet, WWW

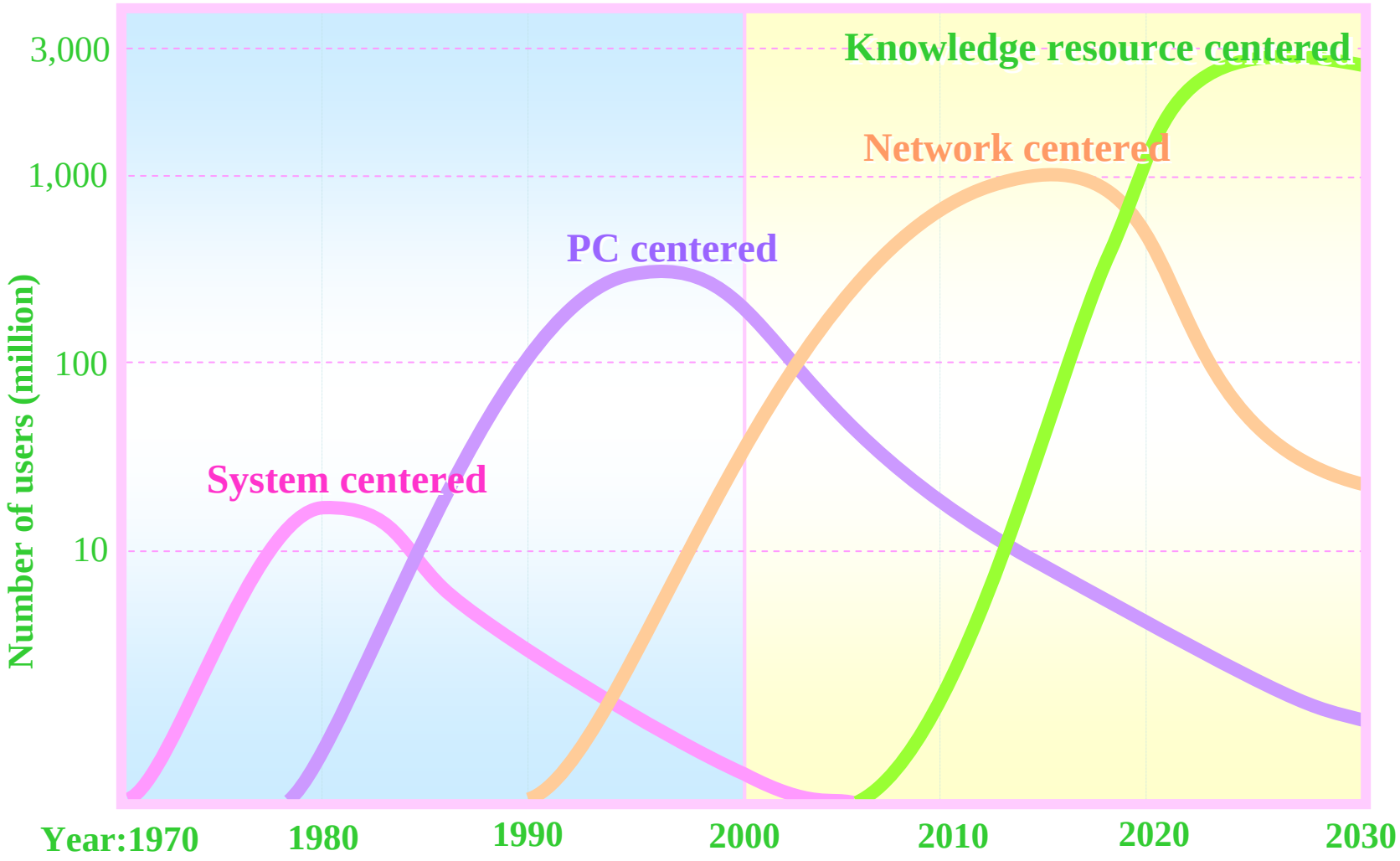
User Interface

From batch processing to dialogue with computer（Time sharing system)
J. Licklider (1960) → Concept of HI, UI, and HCI

Sketchpad: Interactive computer（Figure processing system）
by Sutherland (1963)
→ Image processing system using HMD and three dimensional location input machine (1968)
（Pioneer research which lead to virtual reality (VR))

NLS：Prototype of augmentation：Engelbart team (1968)
A large-size display is divided into windows + mouse
CSCW's first example

Paradigm shift (Business growth)



David C. Moschella: “Waves of Power”

Personal Computer

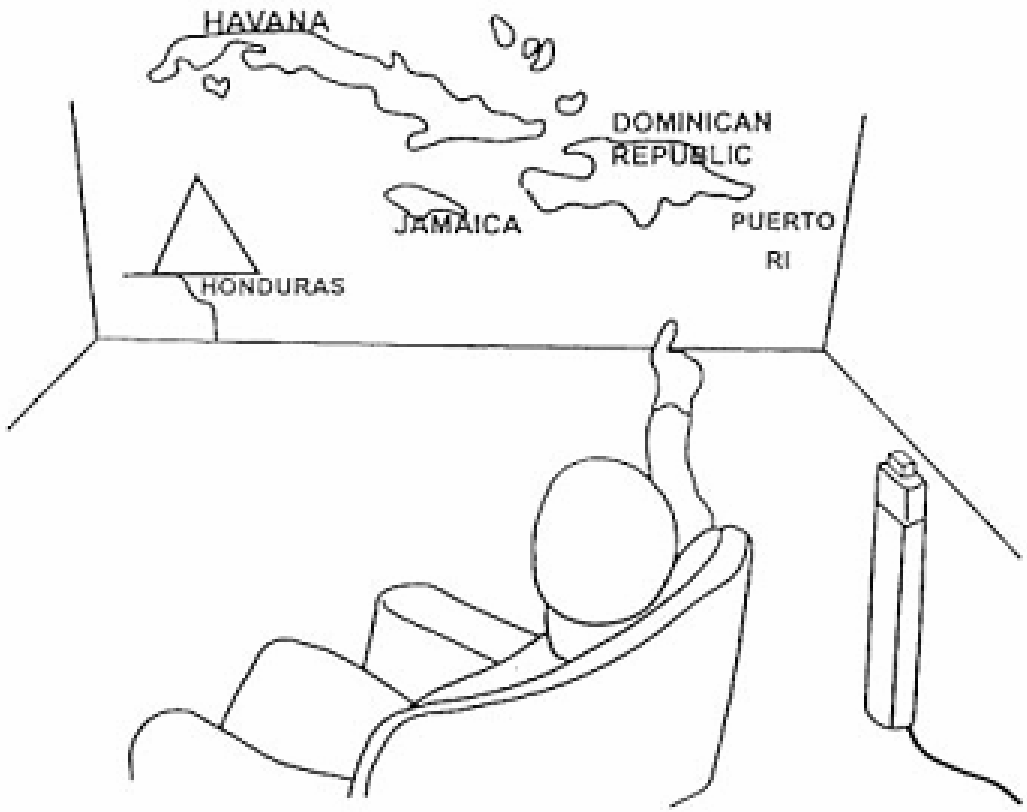
Idea simulator（idea to program）：A. Kay

→ Plan of personal computer (1968)
→ Idea of Dynabook → Smalltalk by Xerox PARC
→ Alto: The first PC (1973), bit-map display, laser printer
→ Ethernet for connecting Alto
→ Star: Advanced version of Alto (1981)：
Direct manipulation interface based on office metaphor
→ Lisa, Macintosh

Put That There：Direct manipulation of graphics by gesture and speech (1970's)
→ MIT Media Lab：N. Negroponte (1984)

Microsoft： B. Gates (1975), Apple Computer： S. Jobs (1976)

Put That There



(MIT Media Laboratory)

What is Multimedia ?（Concept & Macro trend）

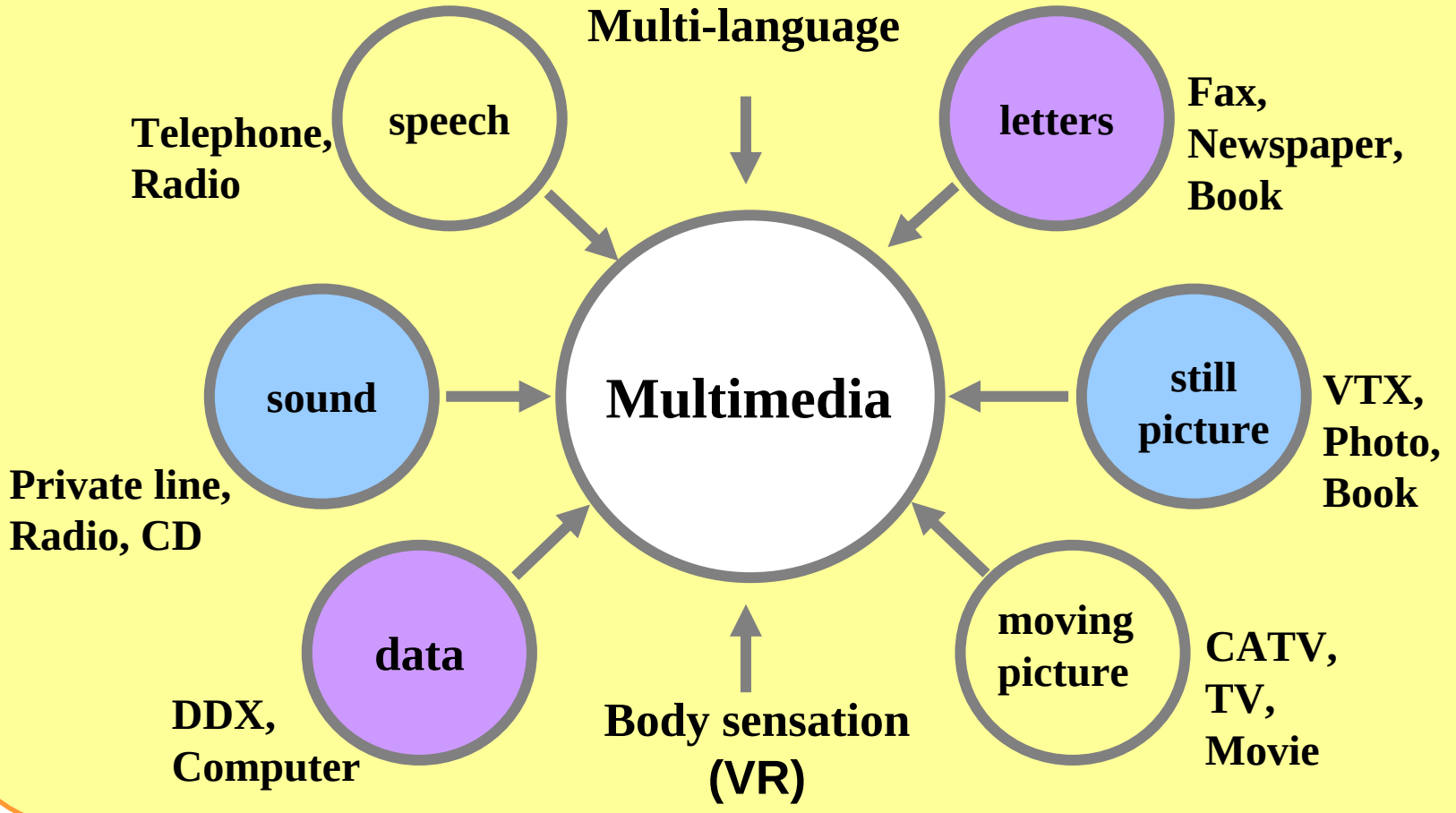
1. Multiple media（from Mono to Multi）

2. Fusion of different types of businesses and services

3. Digital processing/Computer processing
   - Integration（media and service）
   - Functionalization（interactive, scalable, structured）

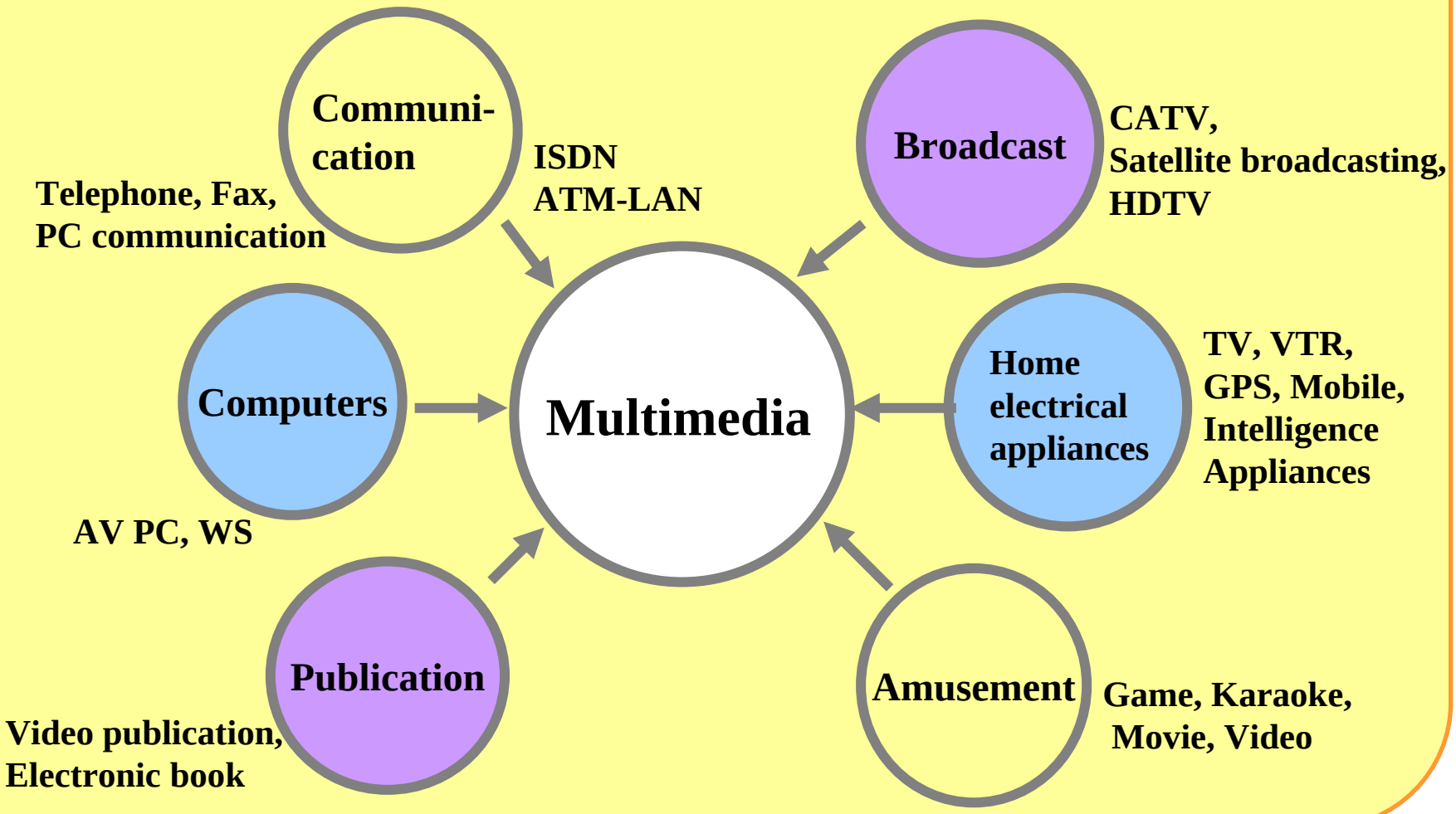
What is Multimedia ?（Concept and Macro trend）

1. Multiple media（from Mono to Multi）



What is Multimedia ?（Concept & Macro trend）

2. Fusion of different types of businesses and services



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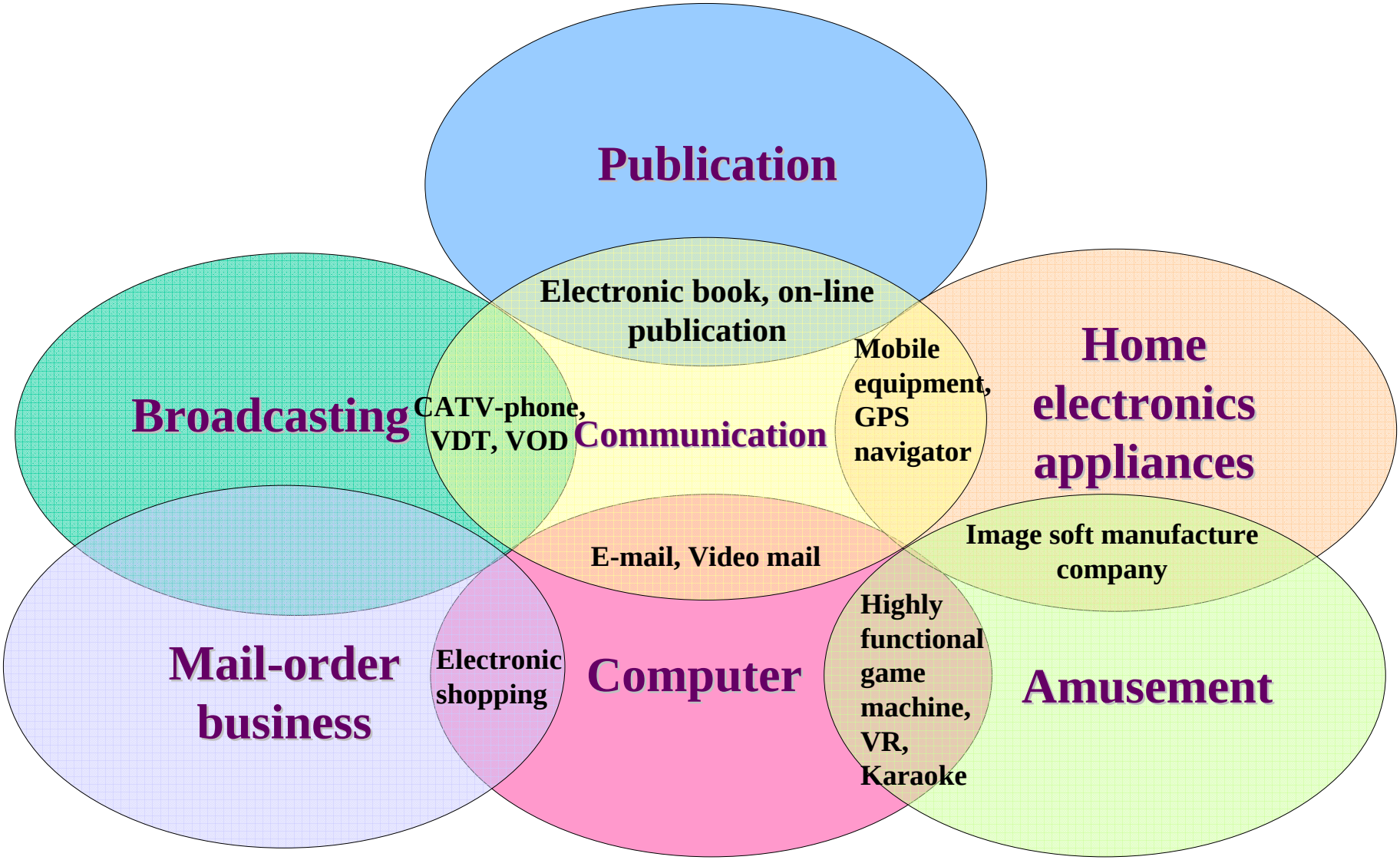
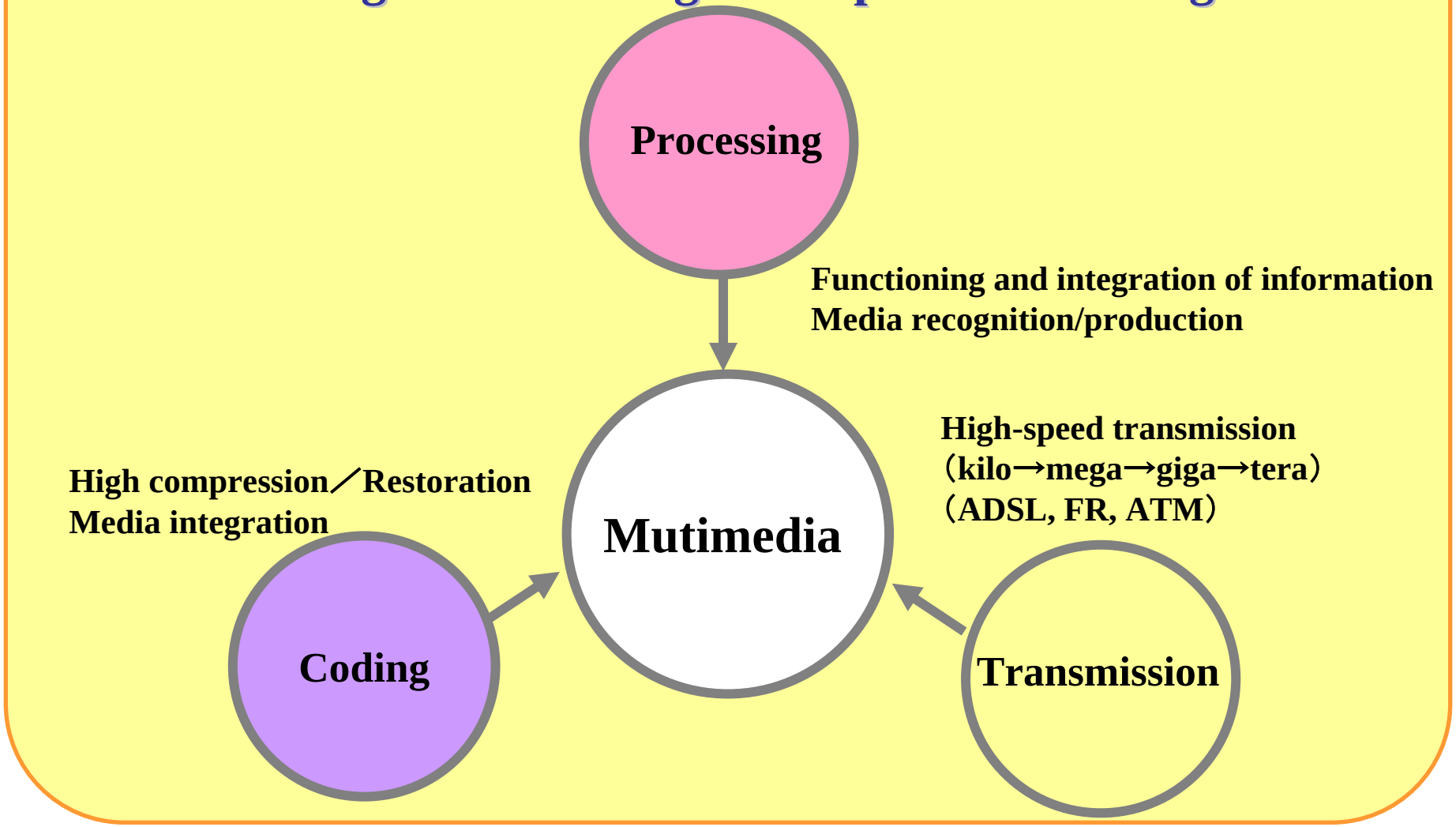


What is Multimedia ? （Concept and Macro trend）

3. Digital Processing／Computer Processing



What is Multimedia ?（Concept and Macro trend）

3. Digital processing/Computer processing

Base:
Development of LSI and optical communication technology

Compression/Restoration
Unified transaction of media

<Digital coding>

Functionalization of information Recognition /production technology

<Digital processing>

ADSL
FTTH
ATM

<Digital transmission>