

# Design in Practical Application, Creativity and Process to form an Expertise L3

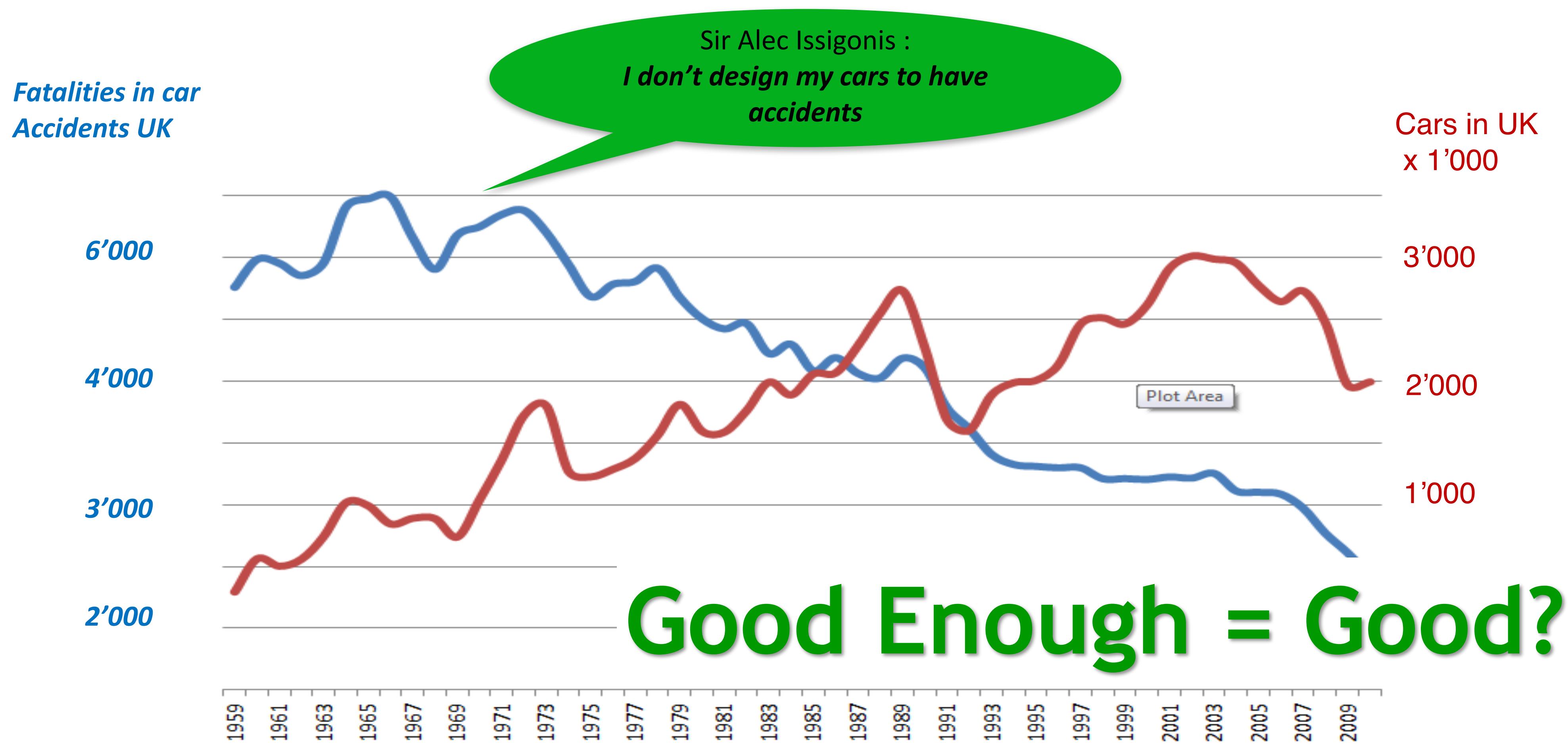
# L3 The external Challenge

1. The farm and the market
2. The mechanisms at work
3. The customer(s)
4. Task 3 and Book 3

# The Mini Story

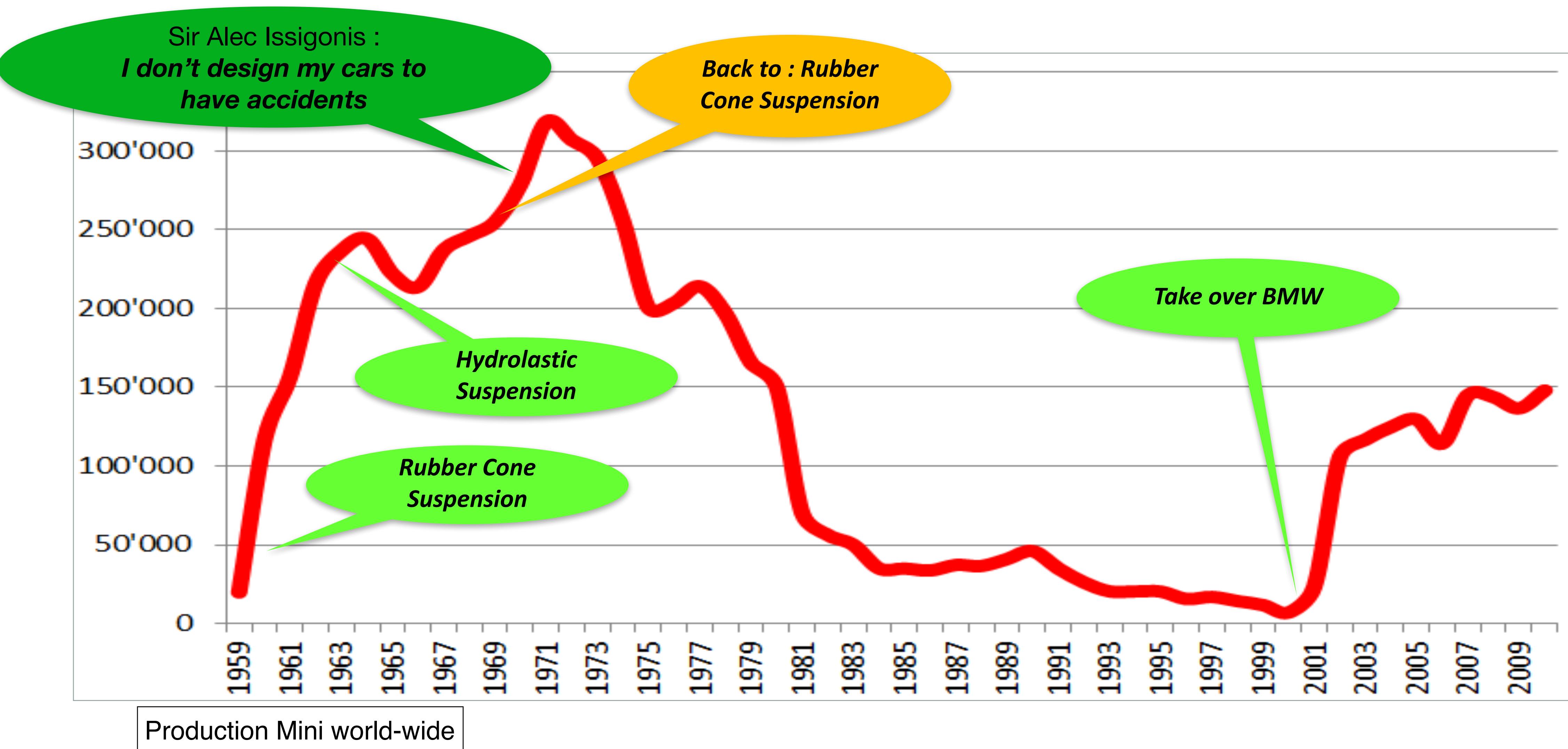


# The Mini Story



Source : Library House of Common: Reported Road Accidents Statistics, Standard Note SN/SG/2198; Oct 24th 2013  
Department of Transportation UK; Transport Statistics Great Britain: 2011

# The Mini Story



# The farm and . . .



Hay

Farm

Work

Source : private images JOSC



Milk

customer

# The farm and . . . investment banking



Source : private images JOSC

Milk



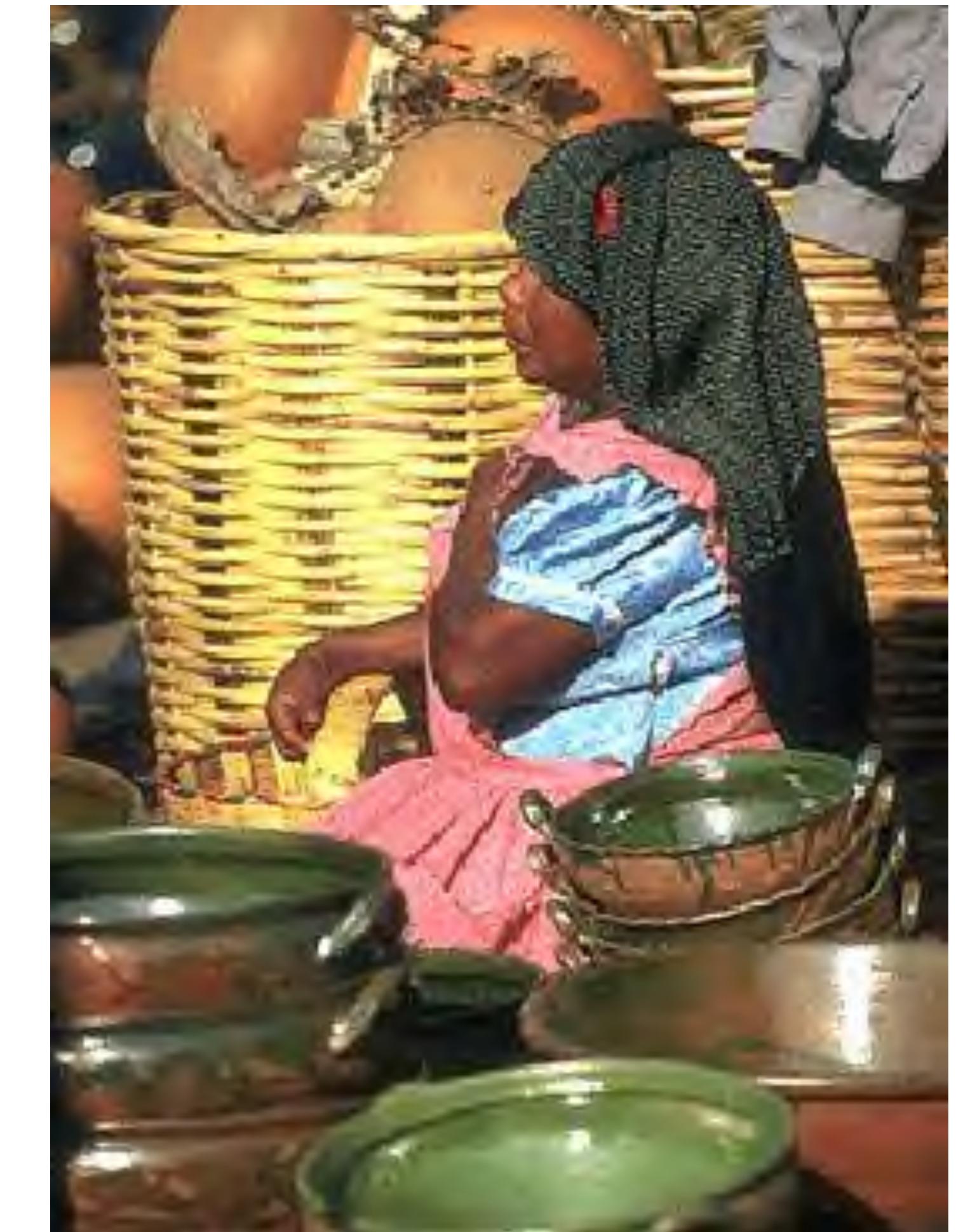
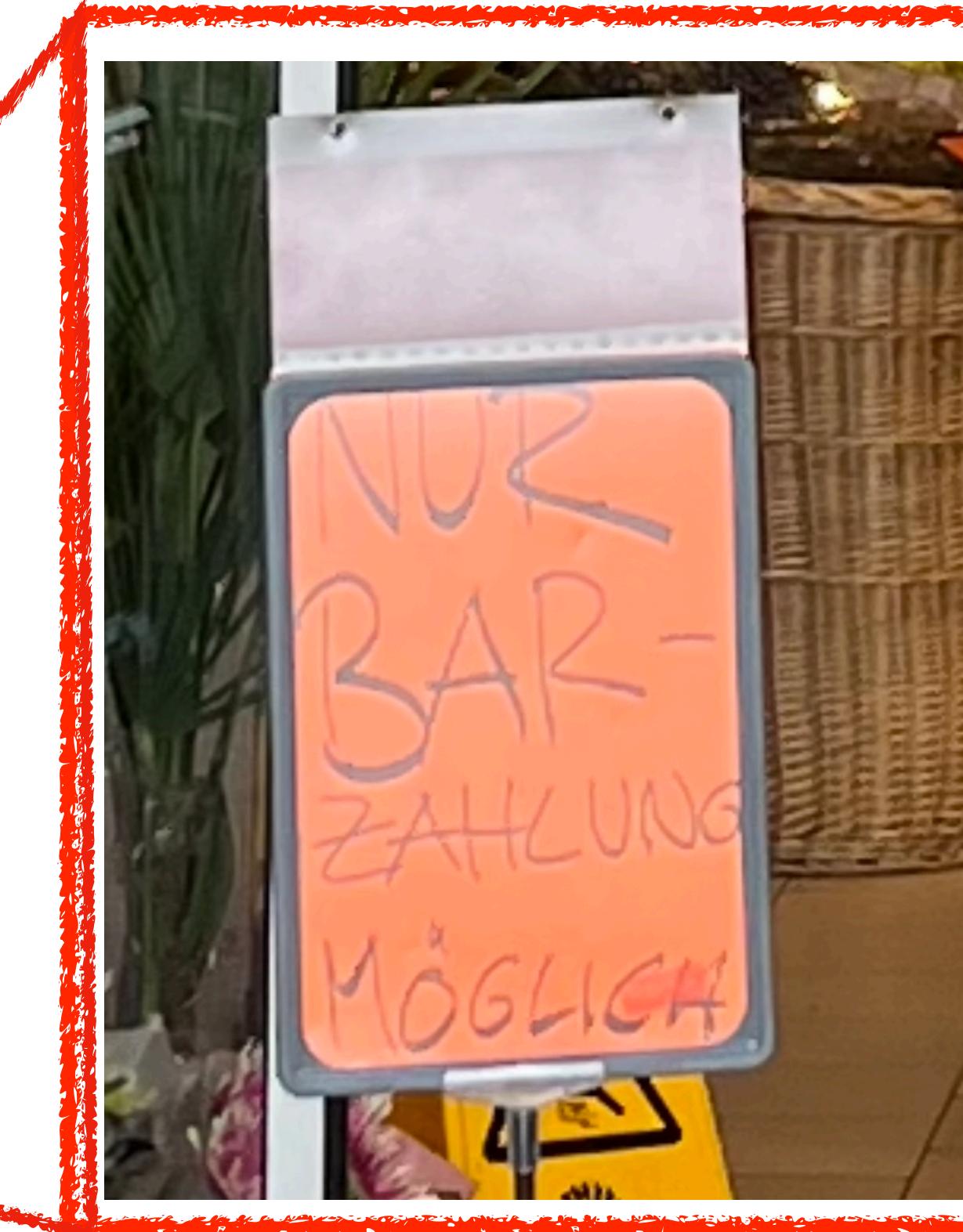
	Cows	Growth rate %	Result -CHF	Fields - ha
<b>2023</b>	10	30	CHF 44'713	6.21
<b>2024</b>	13	33.00	CHF 58'126	8.07
<b>2025</b>	17	36.30	CHF 77'308	10.73
<b>2026</b>	24	39.93	CHF 105'371	14.62
<b>2027</b>	33	43.92	CHF 147'445	20.46
<b>2028</b>	47	48.32	CHF 212'208	29.45
<b>2029</b>	70	53.15	CHF 314'736	43.68
<b>2030</b>	108	58.46	CHF 482'009	66.89
<b>2031</b>	171	64.31	CHF 763'798	106.00
<b>2032</b>	281	70.74	CHF 1'254'979	174.16
<b>2033</b>	479	77.81	<b>CHF 2'142'731</b>	297.36
<b>Accumulated</b>	Growth Rate 10% / annum		<b>CHF 5'603'423</b>	

# What do the market participants want?

- Minimal effort
  - purchase goods
  - use of resources
  - minimal turn around
  - minimal risk
- maximum profit



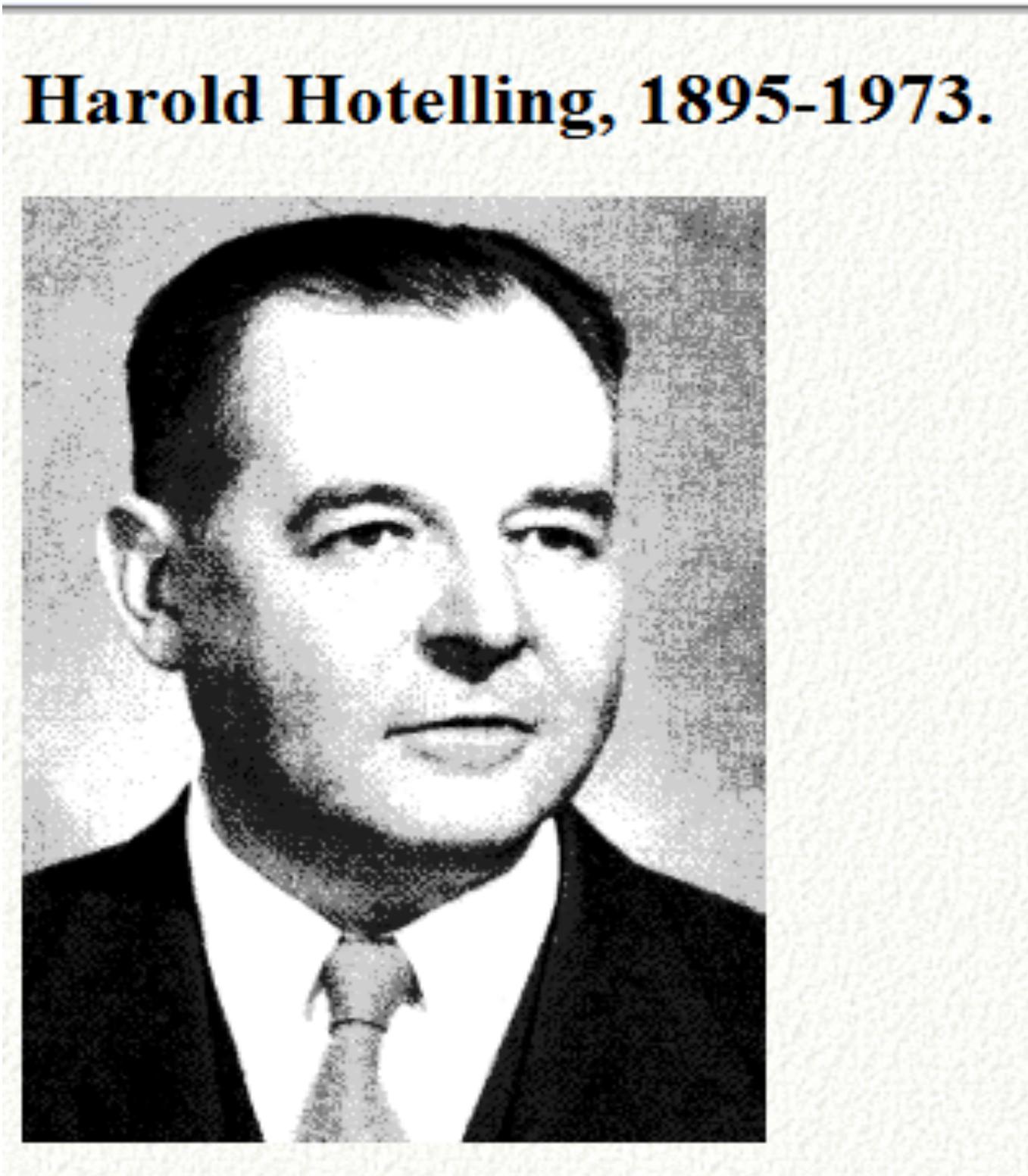
# ... the market



Source : private images JOSC

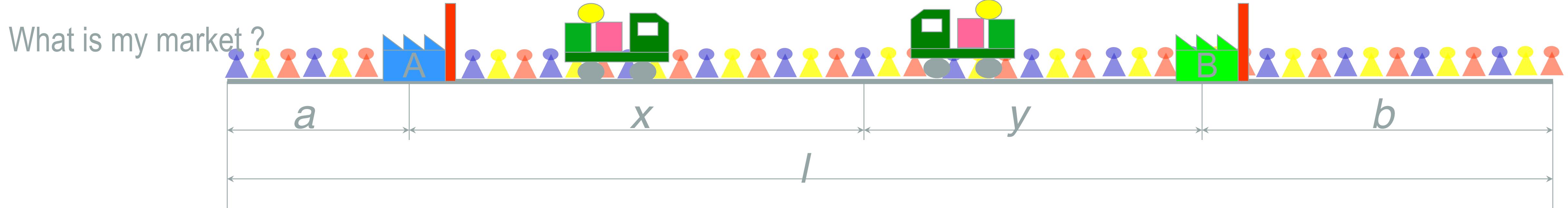
*It takes place with local and economic alternatives*

# A small little theory : what is my market?



**Stability in competition;** Harold Hotelling ;  
*the economic journal*; Vol. 39, No 153. (Mar 1929)

# A simple linear market



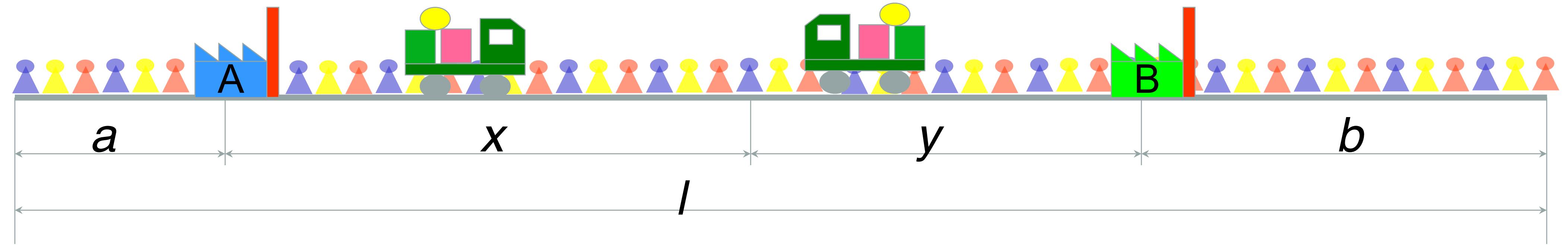
- cost of production for A and B equal ( $=0$ )
- consume /time /distance uniform
- constant consume per distance
- preference by price only
- cost of transport  $c$  - \$/km
- $p_{1,2}$  - price
- $q_{1,2}$  - quantity sold

- The price of A and B need NOT to be equal,  $p_2$  may be higher; however :  
$$p_2 < p_1 - c * (l-a-b)$$
- If this condition is maintained we find a point of indifference at :  
$$p_1 + c*x = p_2 + c*y \quad [1]$$
- There is also a trivial geometric condition  
$$a + x + y + b = l \quad [2]$$

*What would you do  
with 2 equations and 2 unknowns ?*

Stability in competition; Harold Hotelling ; the economic journal; Vol. 39, No 153. (Mar 1929)

# If you abuse it you loose it



- cost of production for A and B equal (=0)
- consume /time /distance uniform
- constant consume per distance
- preference by price only
- cost of transport  $c$  - \$/km
- $p_{1,2}$  - price
- $q_{1,2}$  - quantity sold

[1], [2] =>

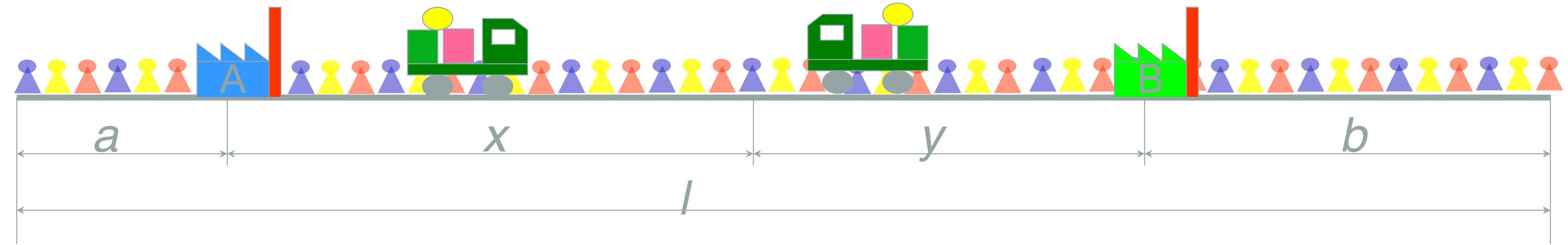
$$x = \frac{1}{2} (l-a-b + \frac{p_2-p_1}{c}) \quad [3]$$

$$y = \frac{1}{2} (l-a-b + \frac{p_1-p_2}{c}) \quad [4]$$

We find the “market size” for A and B  
dependent on their pricing  $p_1$  and  $p_2$

Stability in competition; Harold Hotelling ; the economic journal; Vol. 39, No 153. (Mar 1929)

# Fear god, tell the truth, make money



- cost of production for A and B equal (=0)
- consume /time /distance uniform
- constant consume per distance
- preference by price only
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***What about profit with [3], [4] ?***

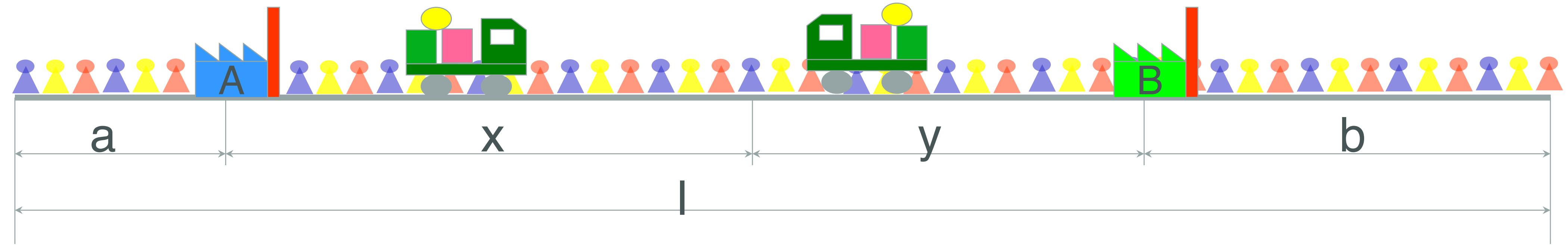
$$\Pi_1 = p_1(a+x) = \frac{1}{2}(l+a-b)*p_1 - \frac{p_1^2 - p_1 p_2}{2c} \quad [5]$$

$$\Pi_2 = p_2(b+x) = \frac{1}{2}(l-a+b)*p_2 - \frac{p_2^2 - p_1 p_2}{2c} \quad [6]$$

***Entrepreneurs will optimize profit !***

Stability in competition; Harold Hotelling ; *the economic journal*; Vol. 39, No 153. (Mar 1929)

# Simplicity is beautiful



- cost of production for A and B equal (=0)
- consume /time /distance uniform
- constant consume per distance
- preference by price only
- cost of transport  $c$  - \$/km
- $p_{1,2}$  - price
- $q_{1,2}$  - quantity sold

**What about profit mit [3], [4] ?**

[5]

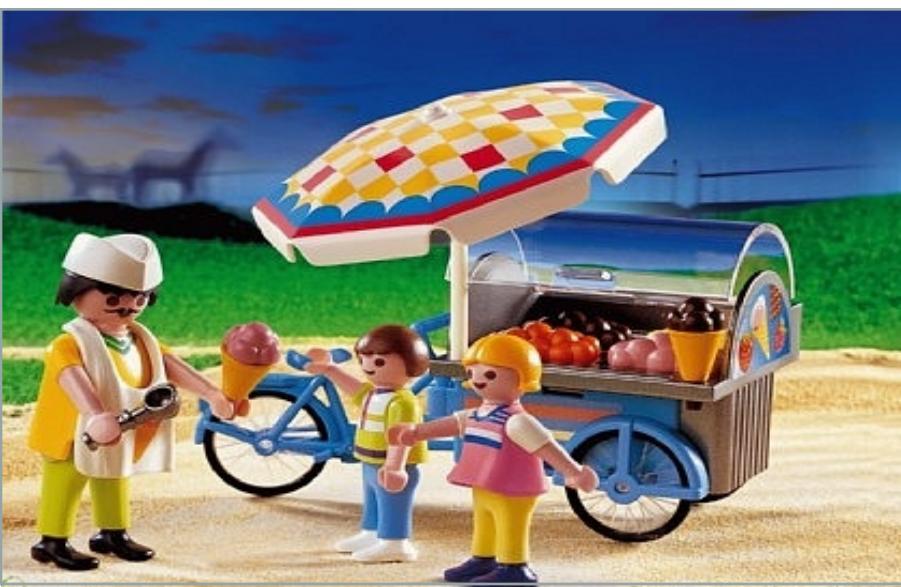
$$\frac{\delta \Pi_1}{\delta 1} = 0 \Rightarrow P_1 = c(l + \frac{a-b}{3}) \quad [7]$$

[6]

$$\frac{\delta \Pi_2}{\delta 2} = 0 \Rightarrow P_2 = c(l - \frac{a-b}{3}) \quad [8]$$

**Economy follows simple linear equations ?**

# Model reality



# Survival with USPs

## Unique Sales Points - Decisive factors in the world market

- Increased ROI for the customer
  - speed ( sustained NOT max)
  - Reliability ( Accident or Catastrophy )
  - Quality ( made in XXX ? )
  - Efficiency in resources
- Service
  - Reliable
  - Fast
  - Competent
- Long Term Perspective
  - Upgrades
  - Extensions
  - Subsequent Investment
- Customer relations
  - Person to person contact
  - Reliability ( A man a word)
  - Infiltration on all levels
- Design ?
- Safe & Secure ?
- Price ?

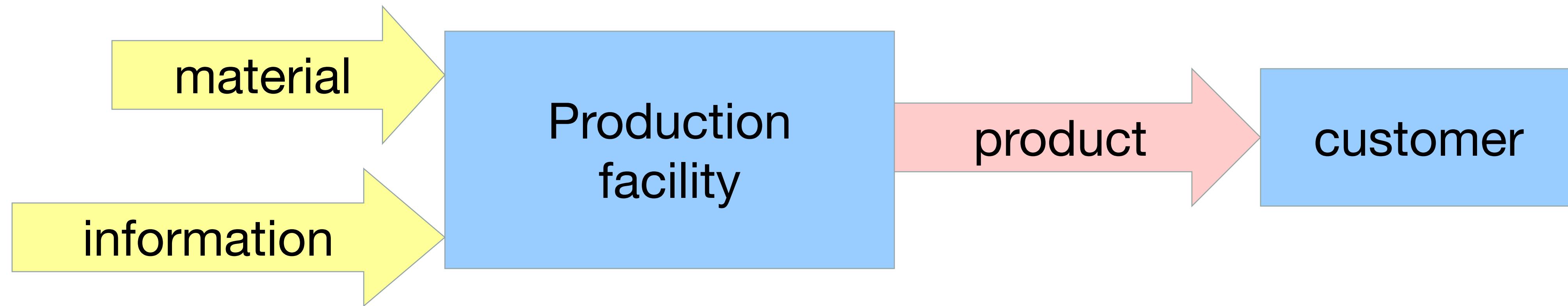
# Transaltion of USPs

## Decision parameters for customers :

- Increased ROI for the customer
- Service
- Long Term Perspective
- Customer relations
- Design
- Safe & Secure
- Price



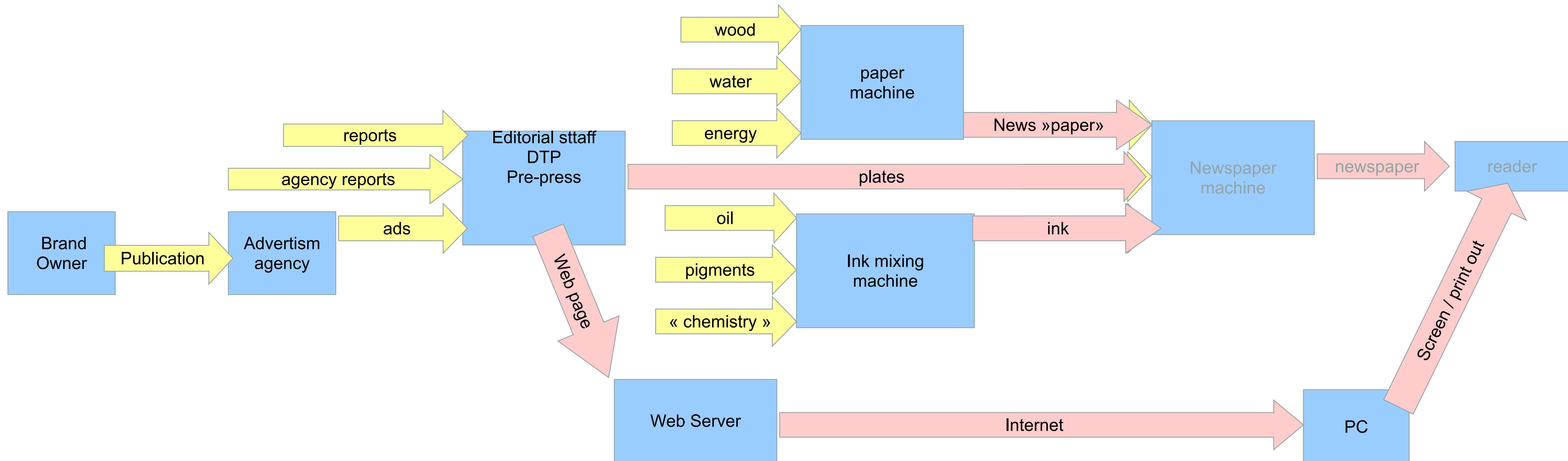
# Understand market context



# Understand your position

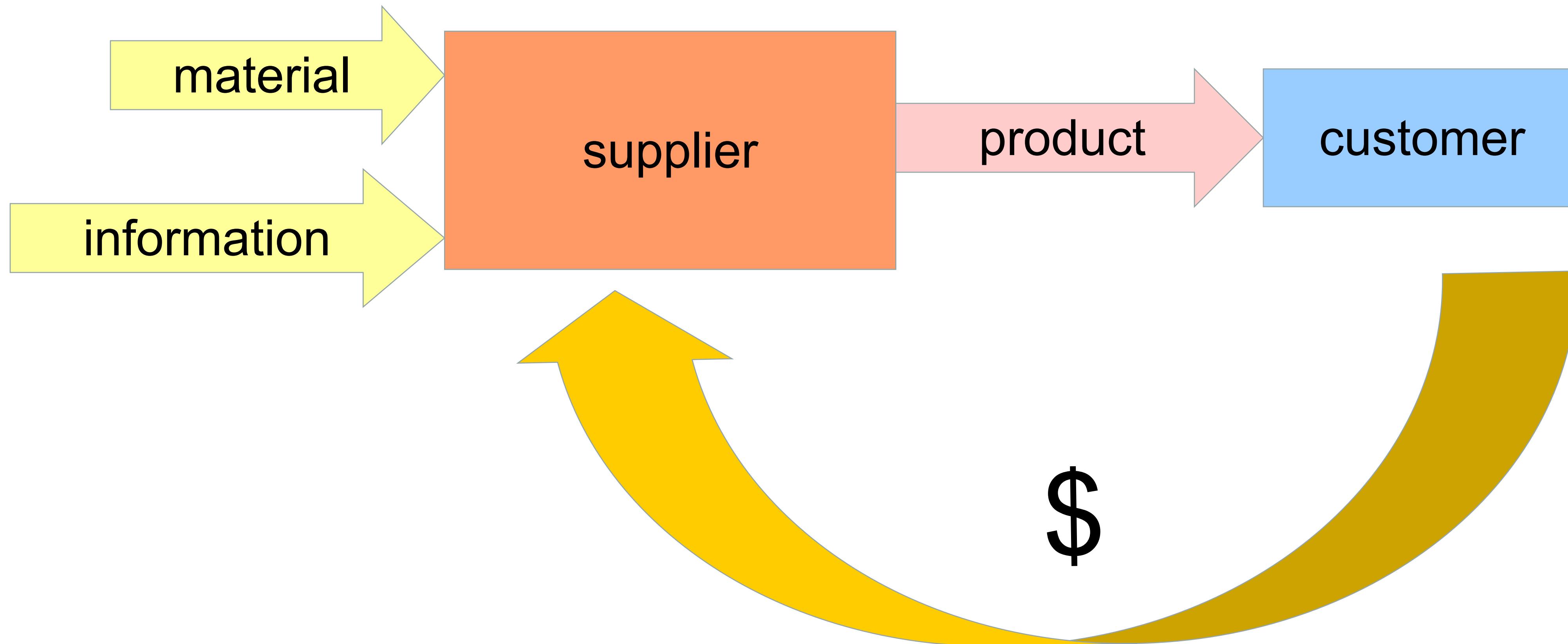
example : newspaper

What is my market ?



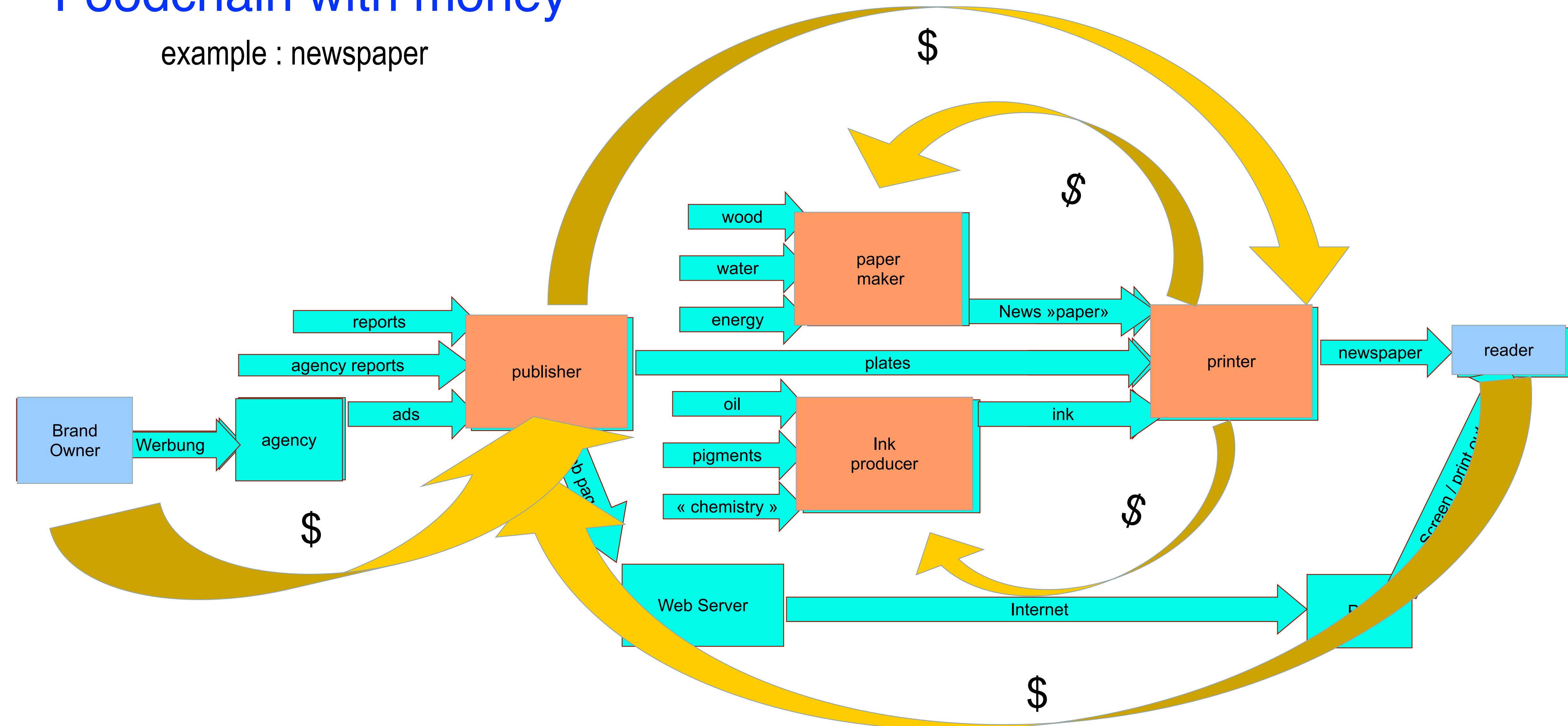
# Follow the money

What is my market (food chain)



# Foodchain with money

example : newspaper



Remarks from the wooden siege

# Predictions and their fulfillment

newspaper, predictions

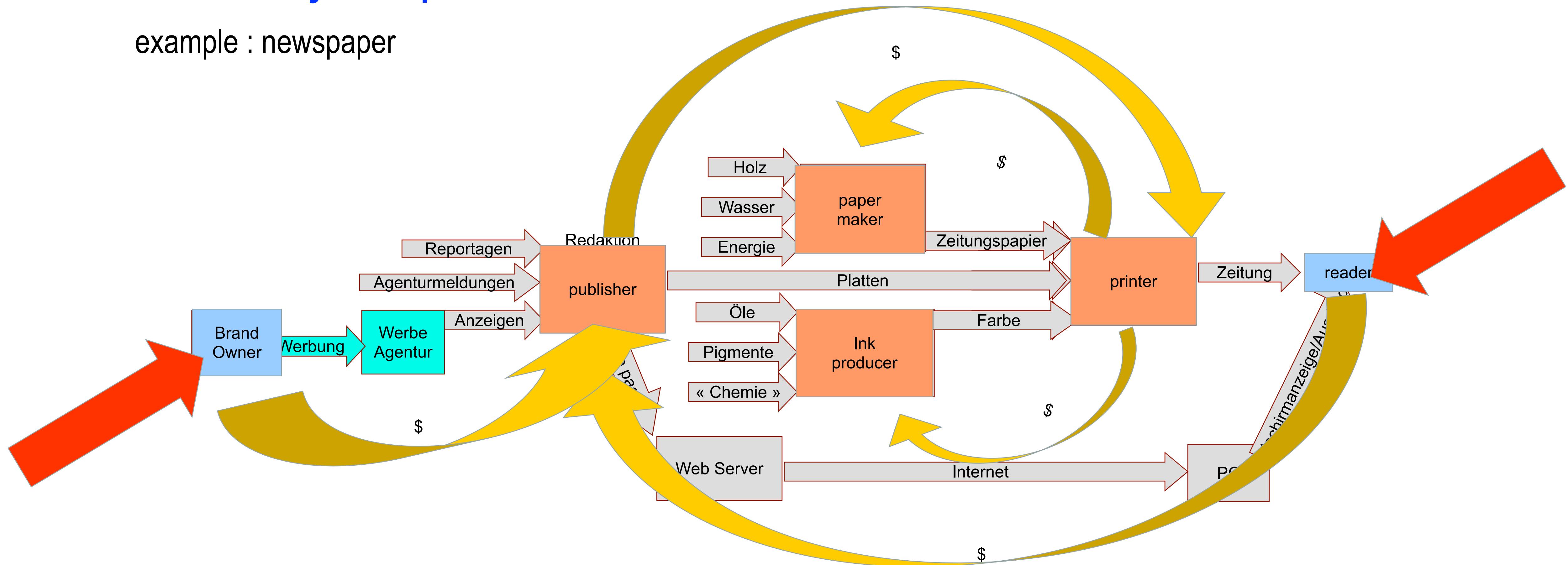
- 1989 b&w : newspaper will be replaced by private TV and internet
- 1995 Bill Gates : the last news paper will be printed in 2005



Das Internet verdrängt immer mehr die Zeitung

# Understand your position

example : newspaper

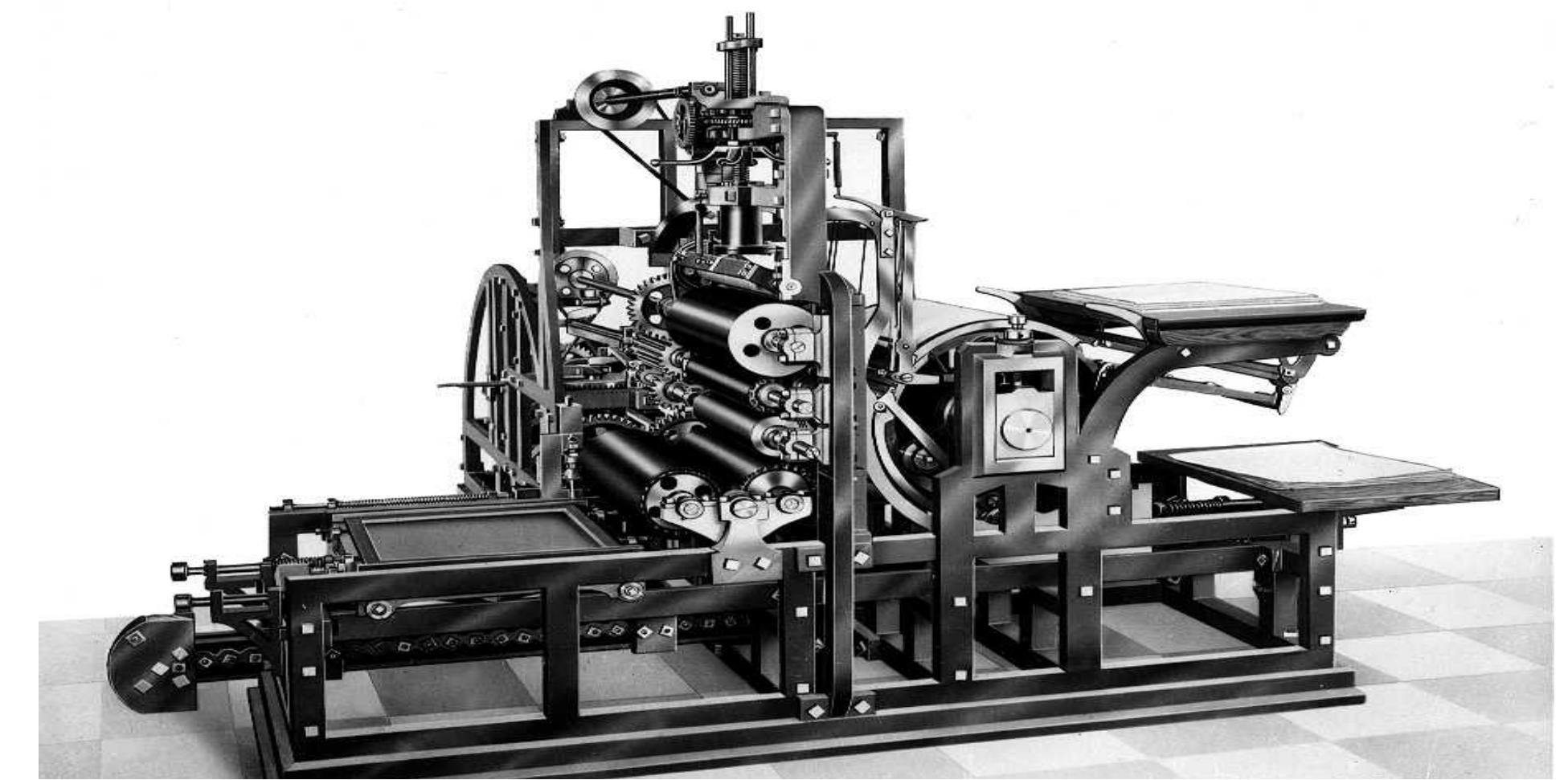


Remarks from the wooden siege

# Publishers End



# KBA: oldest printing machine manufacturer in the world

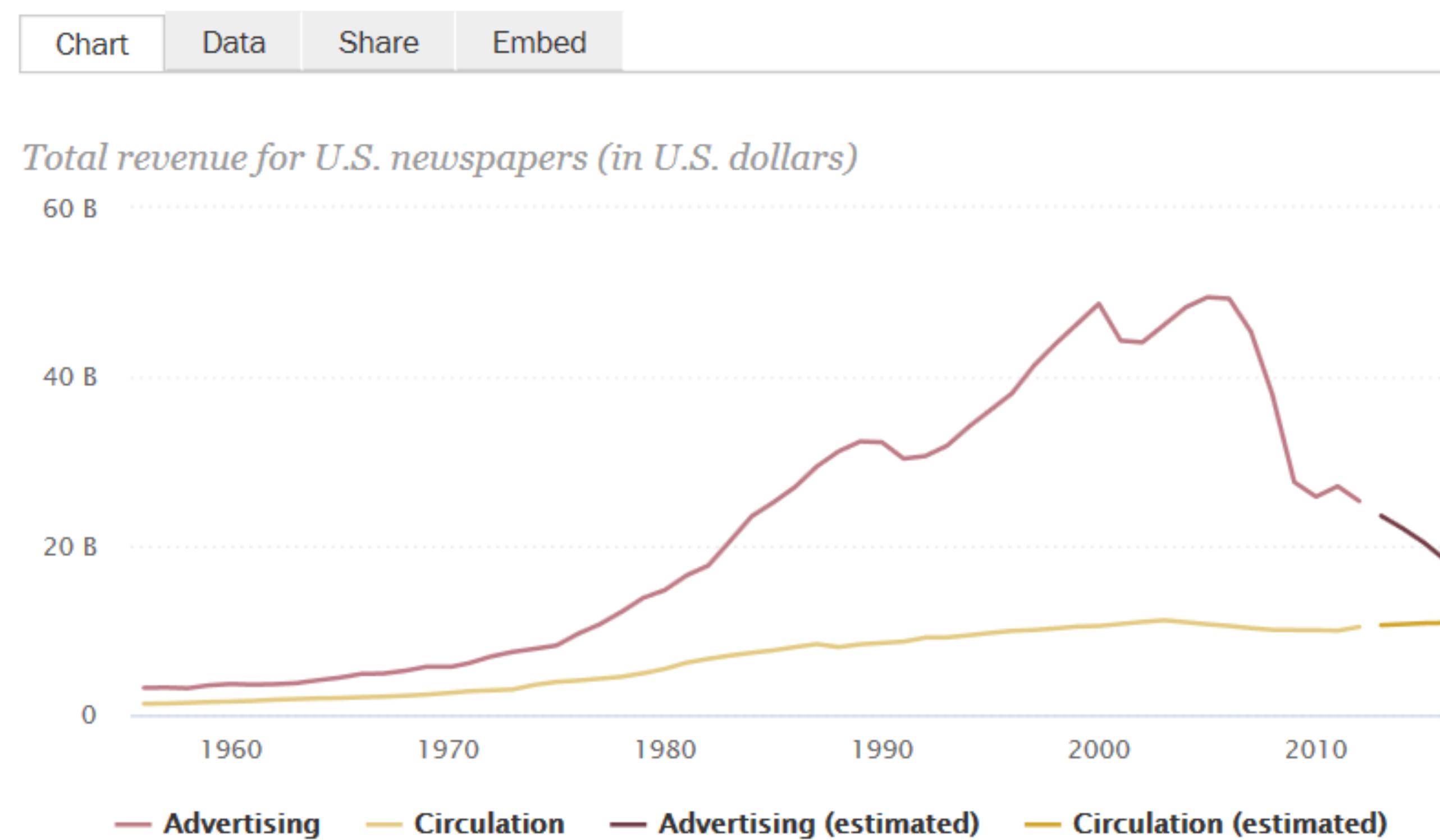


Erste Zylinderpresse von 1812

- 1812: Friedrich Koenig builds first steam engine driven printing machine
- 1814: 360 years after Gutenberg the Times in London uses the first two presses
- 1817: Friedrich Koenig und Andreas Bauer are founding Koenig & Bauer in Oberzell near Würzburg

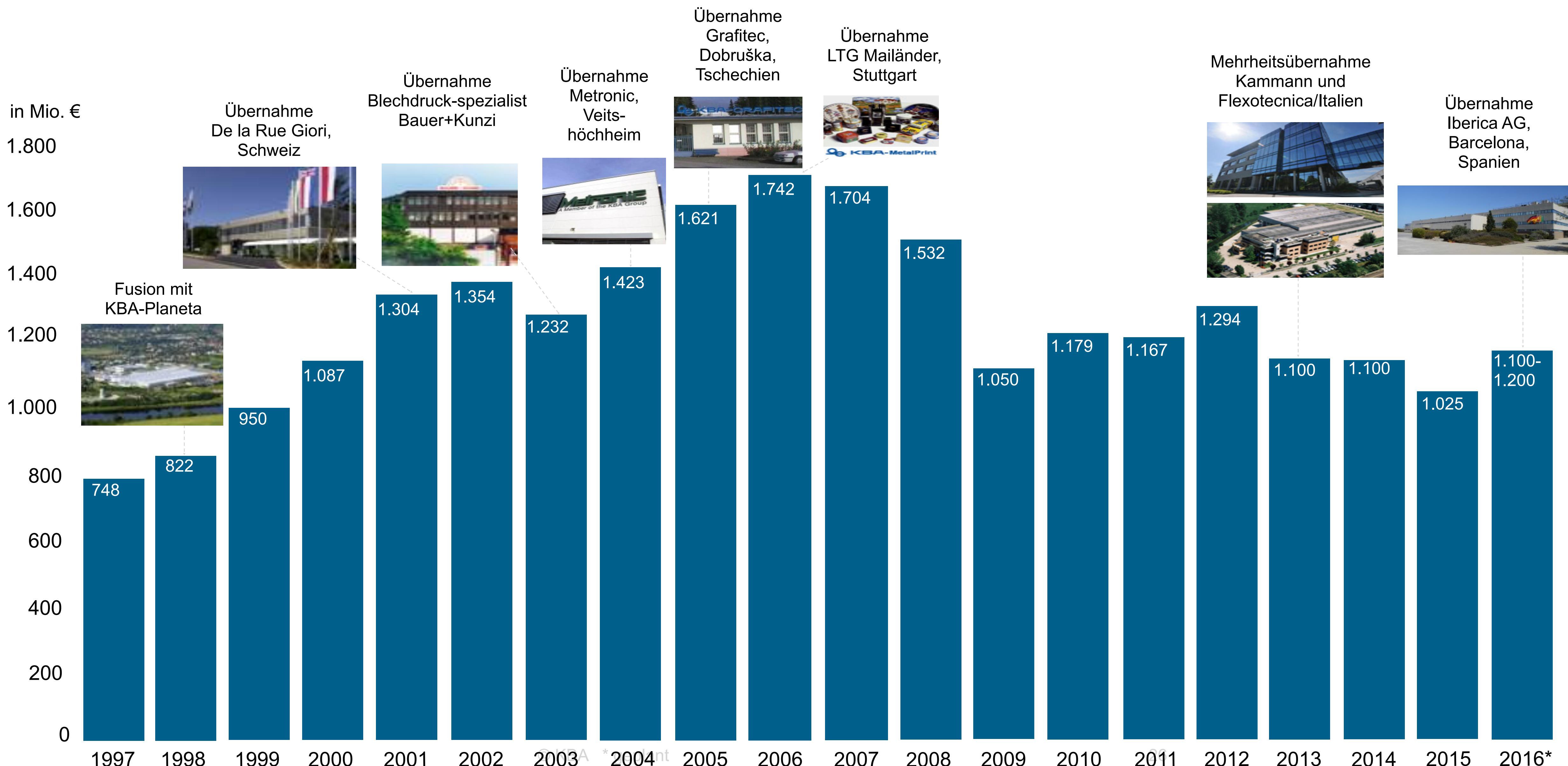
# KBA: decline of the newspaper

## Newspaper industry estimated advertising and circulation revenue



Source: News Media Alliance, formerly Newspaper Association of America, (through 2012); Pew Research Center analysis of year-end SEC filings of publicly traded newspaper companies (2013-2016).

# KBA-Gruppe: change in portfolio



# Consumer end : Reading traces



# Man develops script



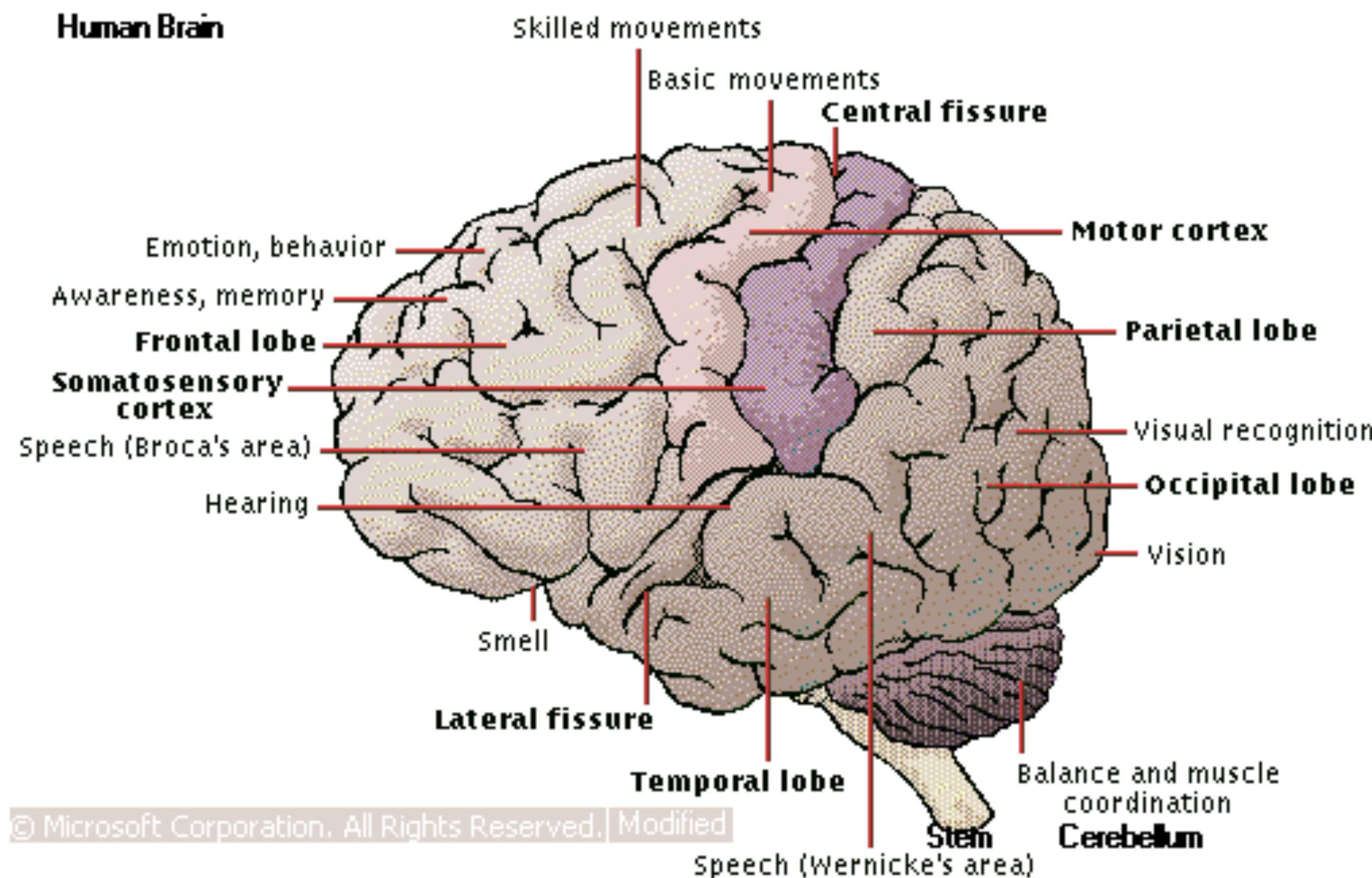
Cave paintings approx. 30.000 ac

# Man develops script



Mesopotamia approx. 4.000 ac

# brain homo sapiens

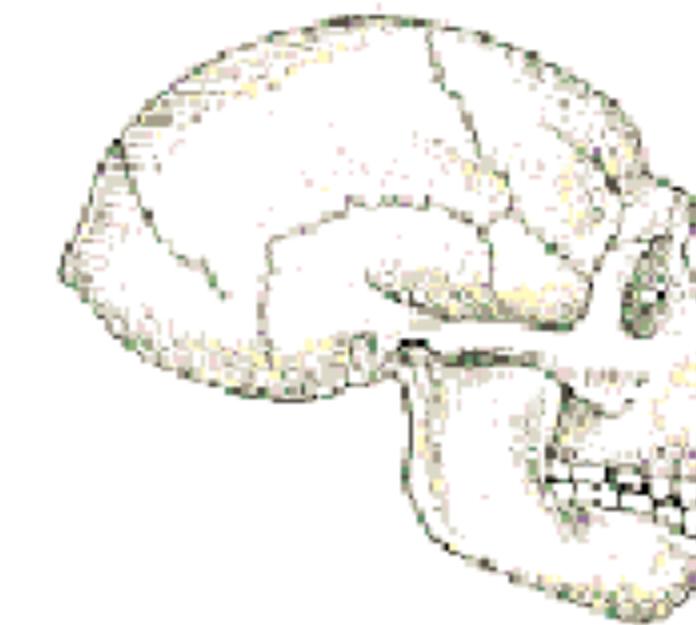


# Evolution homo sapiens

Australopithecus  
- 2,3 Mio Jahre



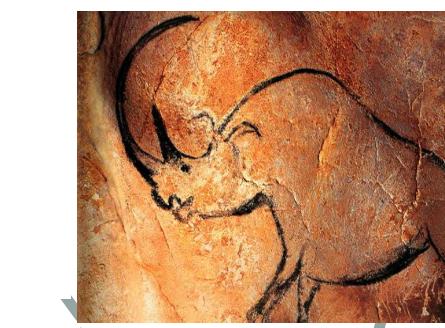
Homo erectus  
- 750 000 Jahre



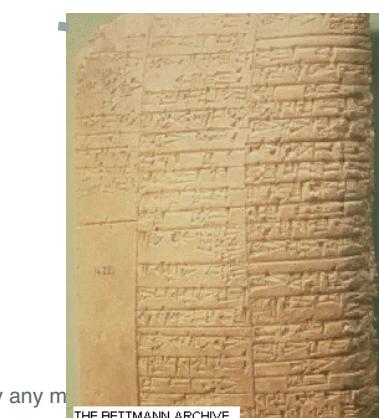
Homo sapiens  
- 100 000 Jahre



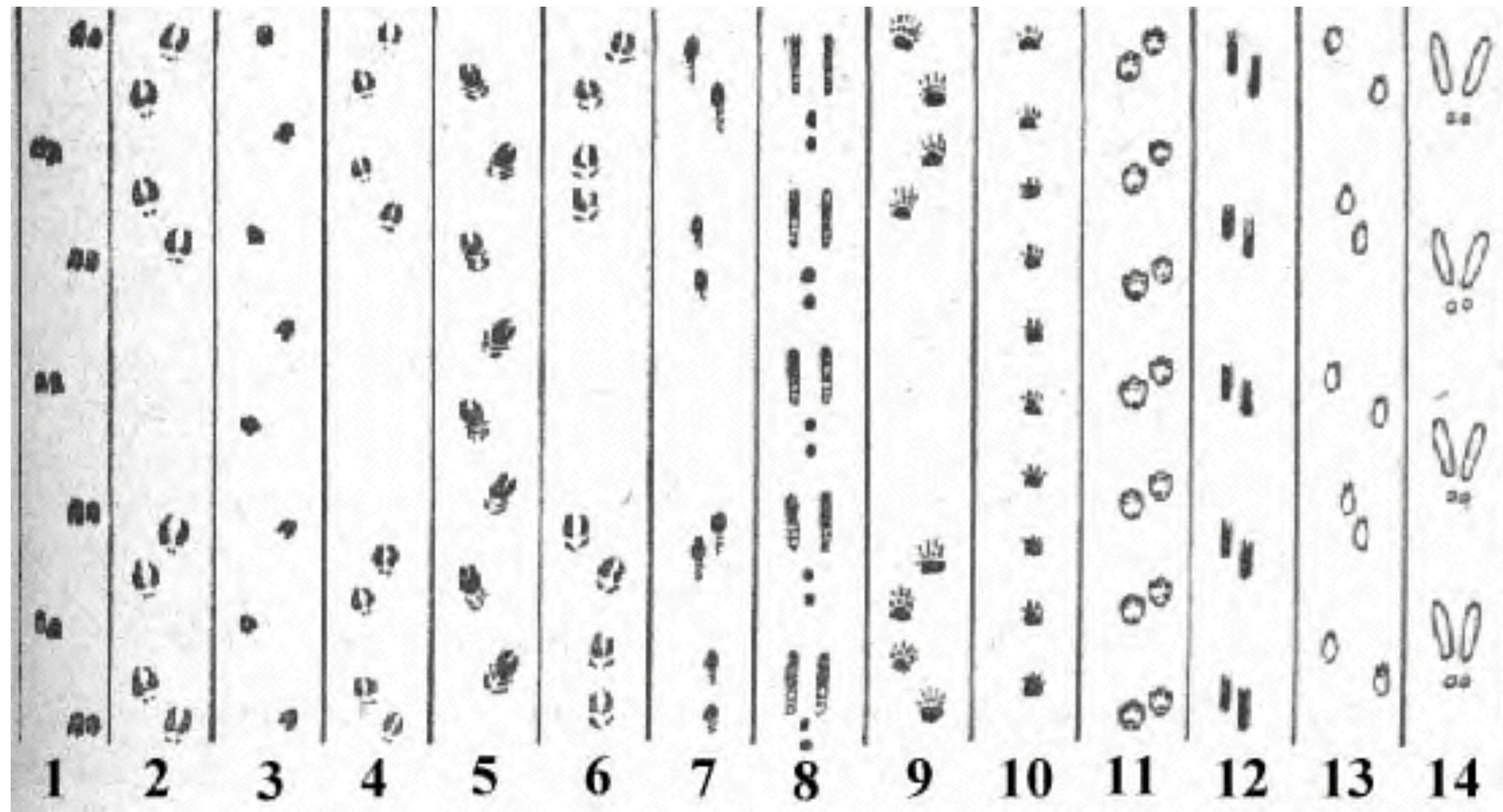
cave drawings  
- 30 000 Jahre



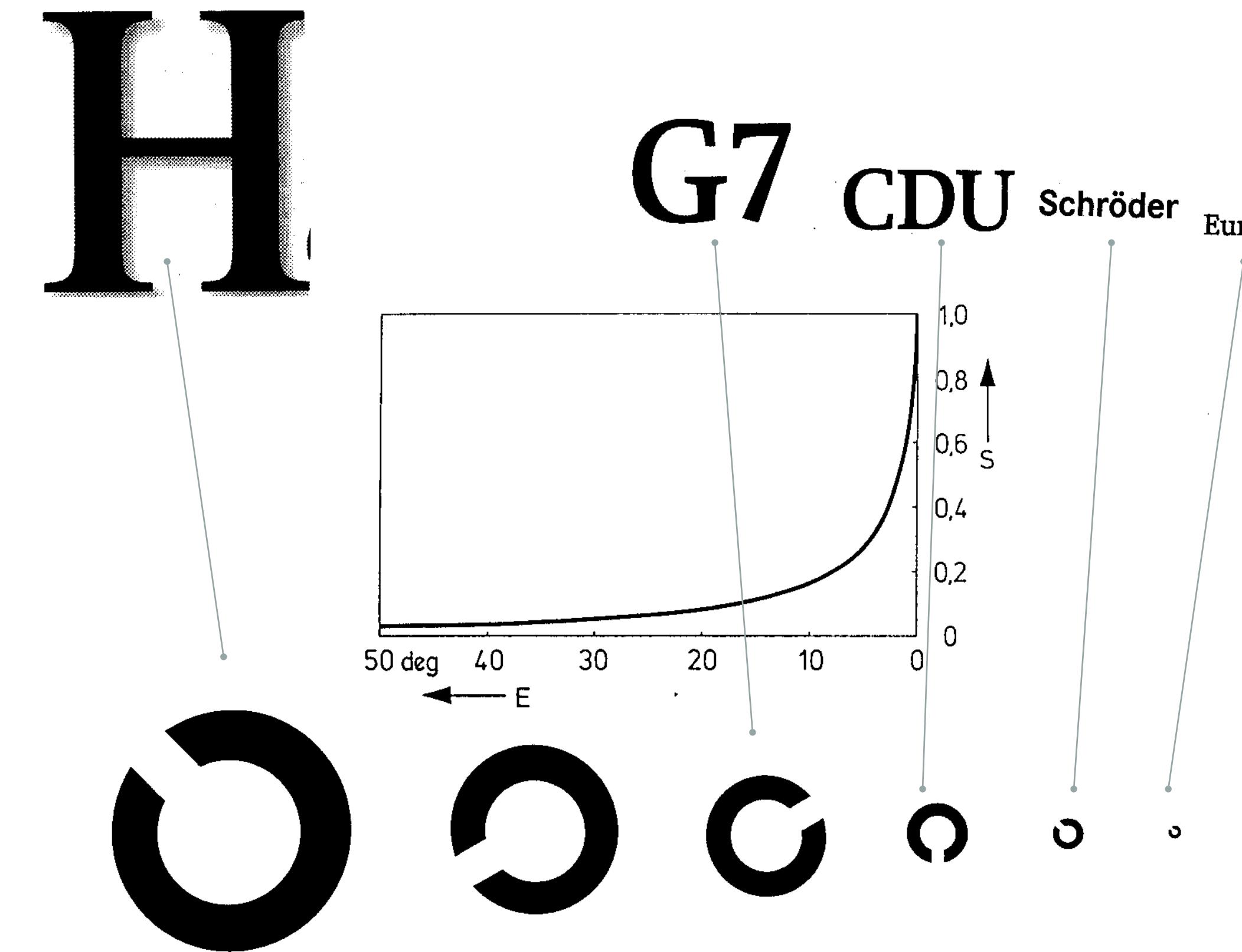
mesopotamia  
- 6 000 Jahre



# Traces of animals (edible !)



# Perception distribution eye



**Abb. 4.7** Oben: Abfall der Sehschärfe mit wachsender Exzentrizität E in Grad angenähert durch die Funktion  $1/(1+E/2)$ . Unten: Kompensatorisch entsprechend ihrer peripheren Lage vergrößerte Landoltringe. □

# Stanford Study eye saccades



# image or scripture



# Absorption of attention when reading



*“You couldn’t have been  
listening. If you’d been listening, you’d be mad.”*

# summary

Newspaper as a media with fairly large surface offers :

- Content transfer via text
- optimal access speed
- Convenience

# 3 B = Bed, Bath, Beach



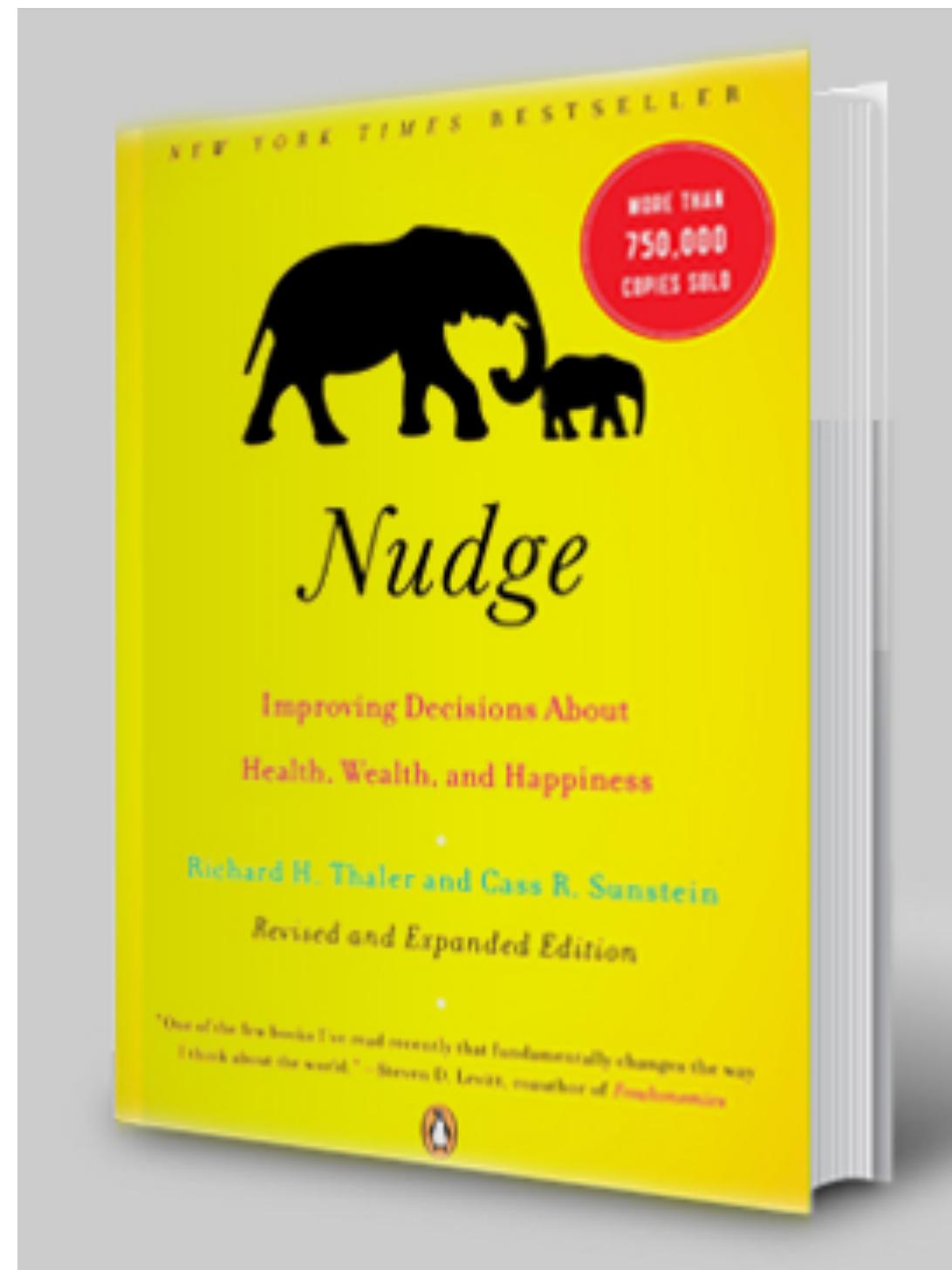
# A small little exercise

A small little exercise for you :

You have learned about the importance to understand the market of your company.

- Select your favorite company where you want to develop your career
- Develop the food chain model for this company
- Make and assessment of the future of this company
- 5 min presentation

# A reading recommendation



Thank you, and  
have fun !