

# System Thinking & Sustainability

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# Cross-cutting themes

To become a pre-eminent university in Europe with a global reputation

To become a socially responsible and sustainable university

To become a networking university

Other languages

Mapa web



La UPF per la sostenibilitat

Compromisos en sostenibilitat

La sostenibilitat en la docència i la recerca

Bones pràctiques ambientals

Activitats de sensibilització

Mobilitat

Climatització

**Setmana de la Mobilitat a la UPF** Del 25 al 29 d'abril  
Tots els campus

**Presentació del Pla de Mobilitat Sostenible i Segura de la UPF** 28 d'abril, a les 12.30 h  
Auditori del campus del Poblenou

#MobilitatUPF

Tweets by @UPFSostenible

UPF Sosteni... @UPFSosteni...

# UPF SOSTENIBLE Quick Assessment



**Who know is it existing?**

**Which Canal? Twitter/Web/TVScreen**

**Interested in participating?**

# The Facts

## *PROFIT*

- Crisis and financial crisis
- Unemployment
- Wealth equity
- Grant & Externalities
- Corruption
- Governance failure
- ...

## *PEOPLE*

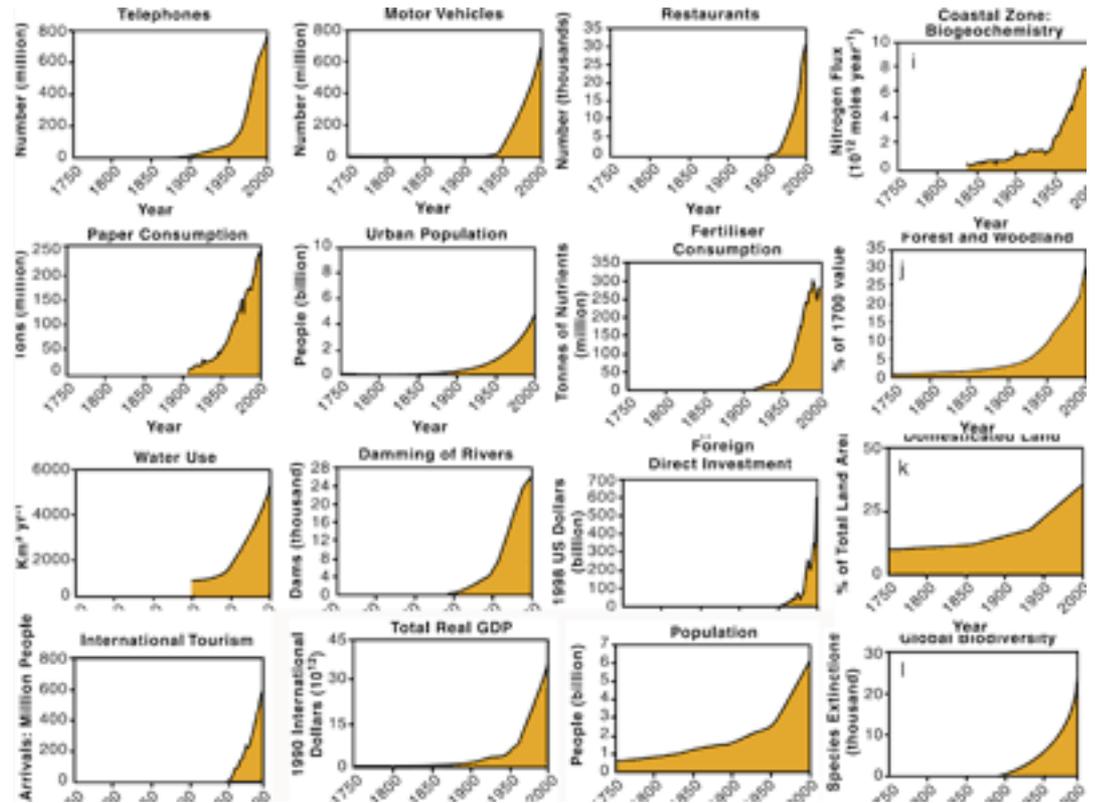
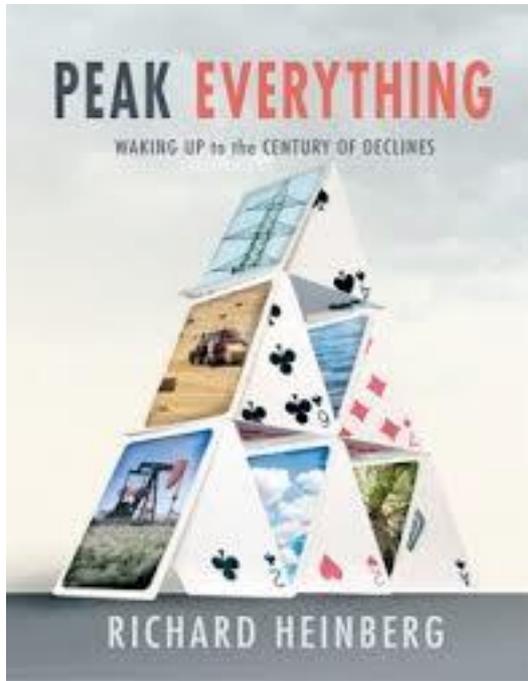
- Wars and conflicts
- Refugees
- Migration to Cities
- Happiness ratio
- Future generation
- Social Justice
- ...

## *PLANET*

- Climate change
- Energy crisis & Peak Oil
- Biodiversity Loss
- Ecological Footprint
- Water Scarcity
- Food Crisis
- ...

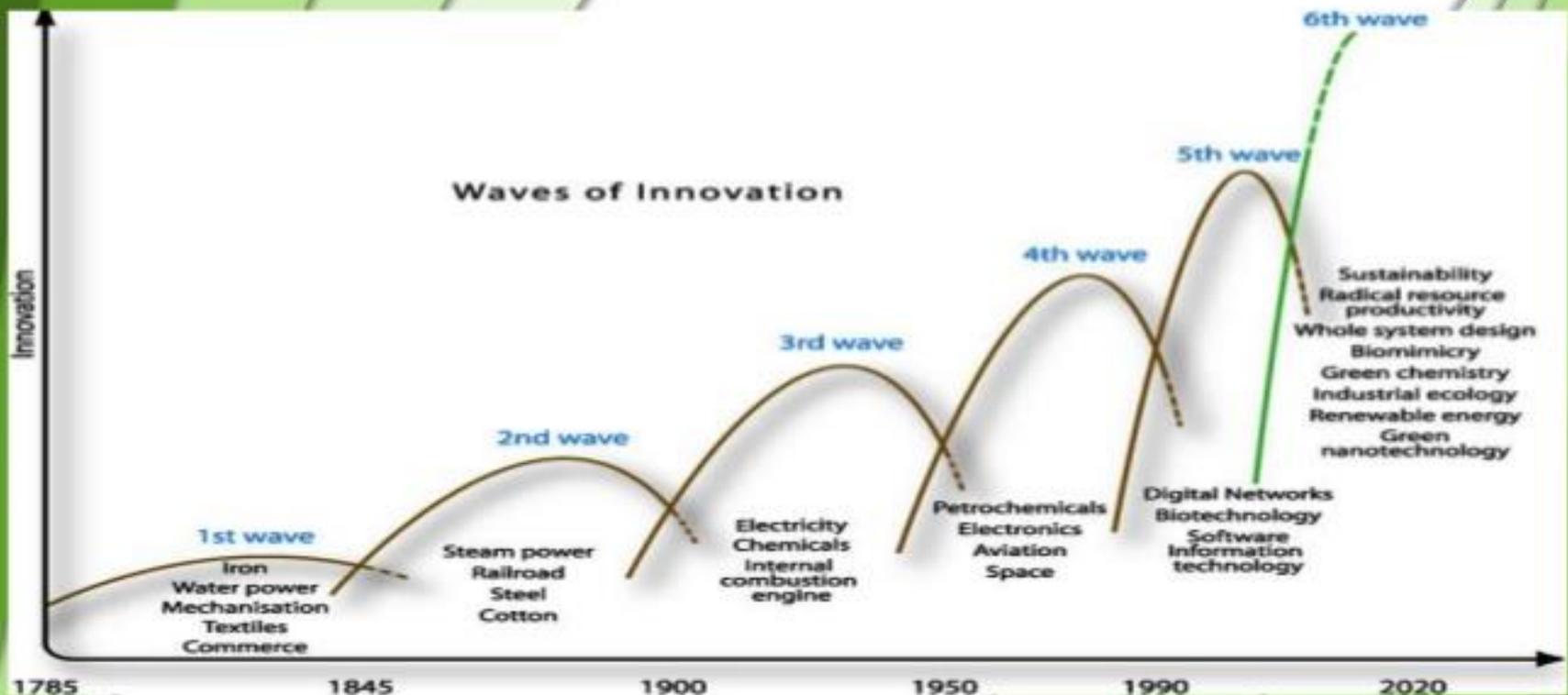


# The process of unsustainability



*Not only about Peak Oil*

# Trillion Dollar Opportunities in the 6<sup>th</sup> Wave of Innovation



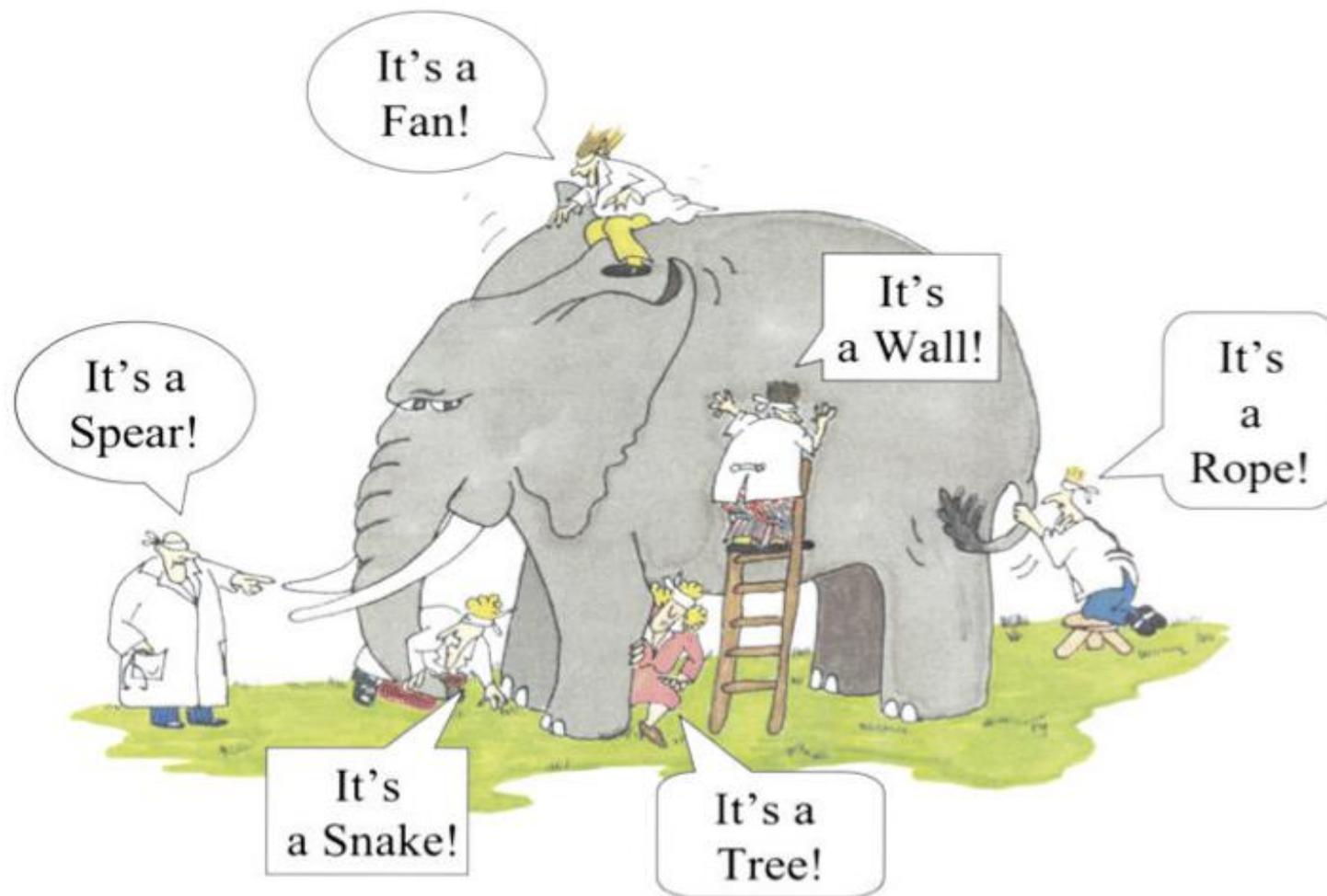
Source: <http://sixthwave.org>

**There are trillion dollar opportunities in the 6<sup>th</sup> Wave of Innovation.**

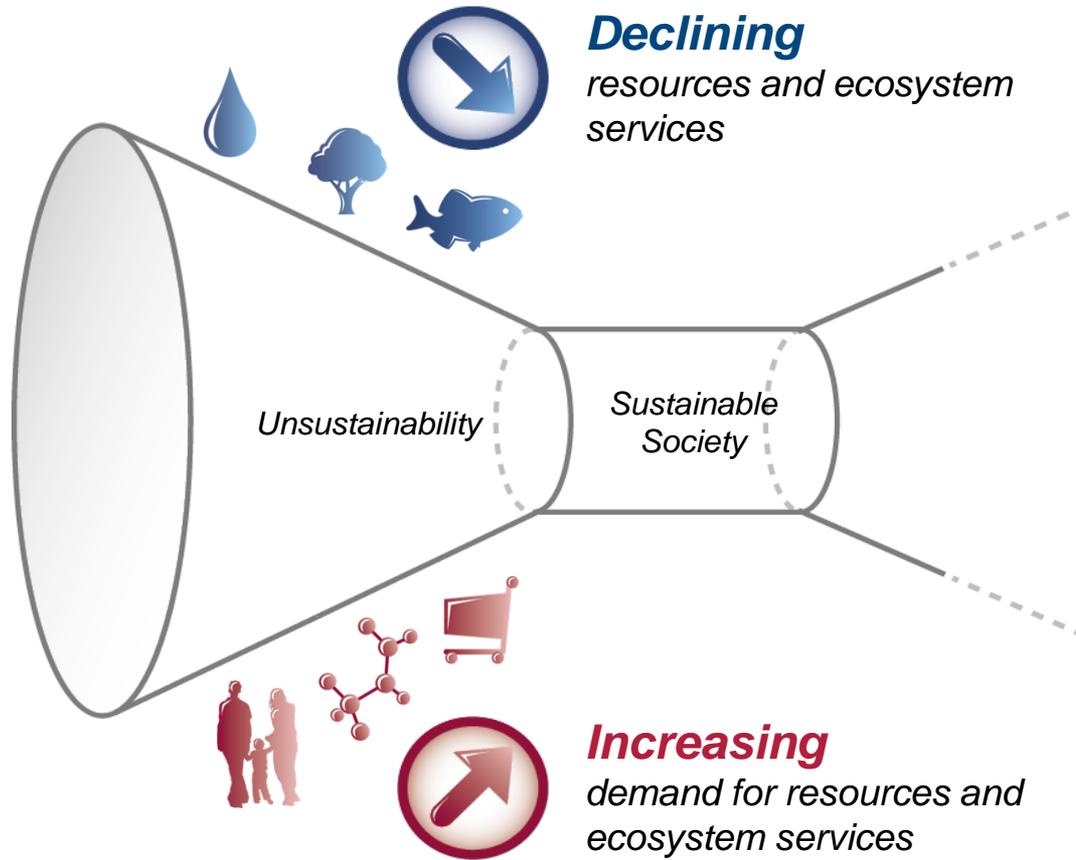
**In the Opportunity Analysis Project (OAP), our team analysed these trillion dollar opportunities.**

A lot of "buzz words"



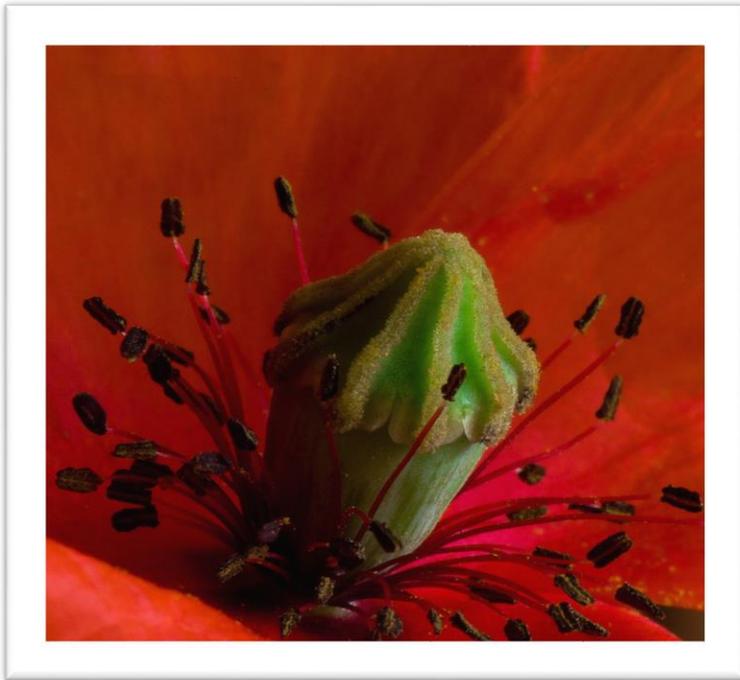


*The Story of the Seven Blind Men and the Elephant*



Source – *The Natural Step*

## How would you describe a Flower?



*A laboratory*



*An helicopter*

## Quote of the day

“

*I believe that our very  
survival depends upon  
us becoming better  
systems thinkers*

”



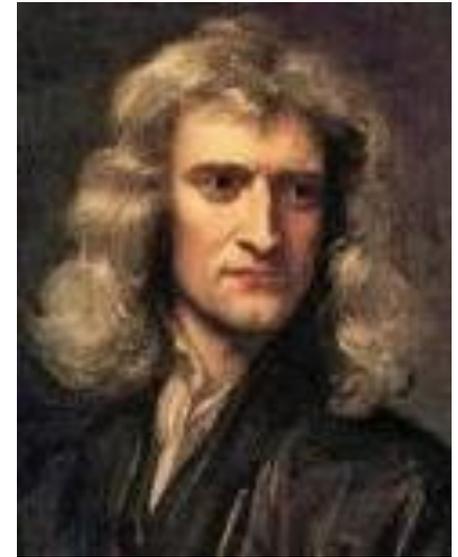
*Margaret J. Wheatley*

[http://en.wikipedia.org/wiki/Margaret\\_J.\\_Wheatley](http://en.wikipedia.org/wiki/Margaret_J._Wheatley)

# Practice 1

## Current Worldview

Cartesian/Newtonian paradigm, which dominated European culture for over 300 years, and is still the dominant way of looking at the world by part. Nature is seen as a resource to be exploited and conquered



1643 - 1727



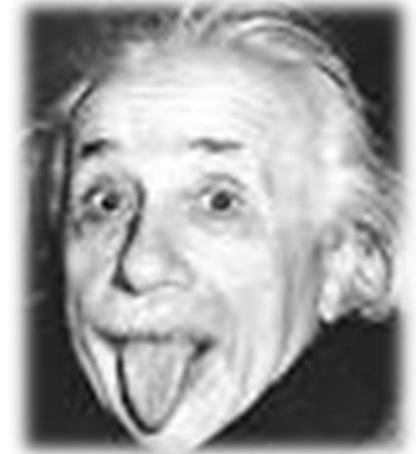
1596 - 1650

**Descartes** introduced the idea of humans as separate from Nature

# The Emerging Worldview

By the early 20th century, cracks were beginning to appear in the mechanical view of the world.

**Einstein's** theory of relativity, confirmed experimentally in 1919, and the emergence of a radically new quantum physics to explain subatomic phenomena, could not be explained by Newtonian mathematics.



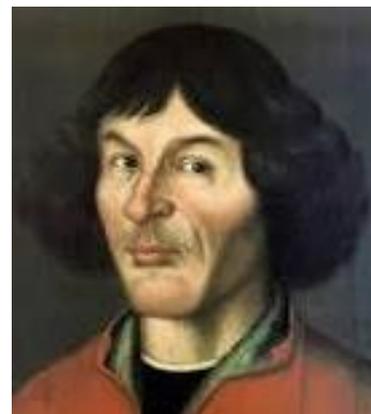
Then in 1927, a dagger to the heart of the reductionist, mechanistic paradigm was delivered by **Werner Heisenberg**, who formulated the Uncertainty Principle of quantum physics, which in essence said that we cannot separate the observer from the observed, contrary to Descartes' assumption

## Paradigm Shift

The discovery of the  
“New World” by  
**Columbus** in 1492



**Copernicus**, who  
claimed that Earth  
rotated around the  
sun.- 1543



# The Emerging Worldview

## NEW PARADIGM THINKERS

Many people have contributed to the emerging worldview

- ❑ **Rudolf Steiner** developed a whole education system, in use today in many countries (Steiner schools, also known as Waldorf schools in the USA). Biodynamic farming is also due to Steiner.
- ❑ British Climatologist **James Lovelock** was the first to come up with the concept of the Earth as a self-regulating system.
- ❑ **Thomas Berry** is an American historian. He is one of the pioneers of deep ecology and ecospiritualism
- ❑ Norwegian philosopher **Arne Naess** contributed to the new paradigm with the 'deep ecology' concept, which sees humans as directly integrated with the environment— not separate from ecology

# The Emerging Worldview

## NEW PARADIGM THINKERS

- ❑ **Bill Mollison** invented permaculture, a new design principle based on working with nature.
- ❑ Eco-philosopher and Buddhist scholar **Joanna Macy** introduced her “Council of all Beings” workshop to illustrate the principles of deep ecology
- ❑ Psychiatrist **Stanislav Grof** brought the concepts of transpersonal psychology to thousands through his holotropic breathing techniques, which often lead to deep spiritual experiences.
- ❑ **Vandana Shiva**, along with **Satish Kumar**, has been defining Earth Democracy and a spiritual lifestyle

# New times, new ways of thinking

**SURVIVALIST**



**EXPLOITATIVE**



**ENTREPRENEURIAL**



**INTEGRAL**



**TRIBAL ORDER**



**AUTHORITARIAN**



**COMMUNITARIAN**



**HOLISTIC**

# The Emerging Worldview

## Clare Graves (1914 – 1986) and his Spiral Dynamics alternative approach

The basic model describes an evolution of the human psyche on an upward spiral towards a more spiritual, holistic worldview that has yet to see its culmination. Each stage is characterized by a particular worldview or value system called a “meme” in the spiral dynamics terminology, and a particular color, and in two tiers, of which the second has barely begun.

Color	Meme	% of People	% of Power
beige	survivalist	0.1	0.01
purple	tribal order	10	1
red	exploitative	20	5
blue	authoritarian	40	30
orange	entrepreneurial	30	50
green	communitarian	10	15
yellow *	integral	1	5
turquoise *	holistic	0.1	1

# Practice 2

*Ecological  
Sphere*

*Economical  
Sphere*

*Social  
Sphere*

*How they are related and influenced?*

# A North Star to Guide Innovation



# MAX BURGER RESTAURANT

## Changing the fast food industry

VISION: MAX IS A SUSTAINABLE COMPANY IN A SUSTAINABLE SOCIETY.



### Max at a Glance

Sweden's oldest and most popular hamburger chain

Family owned

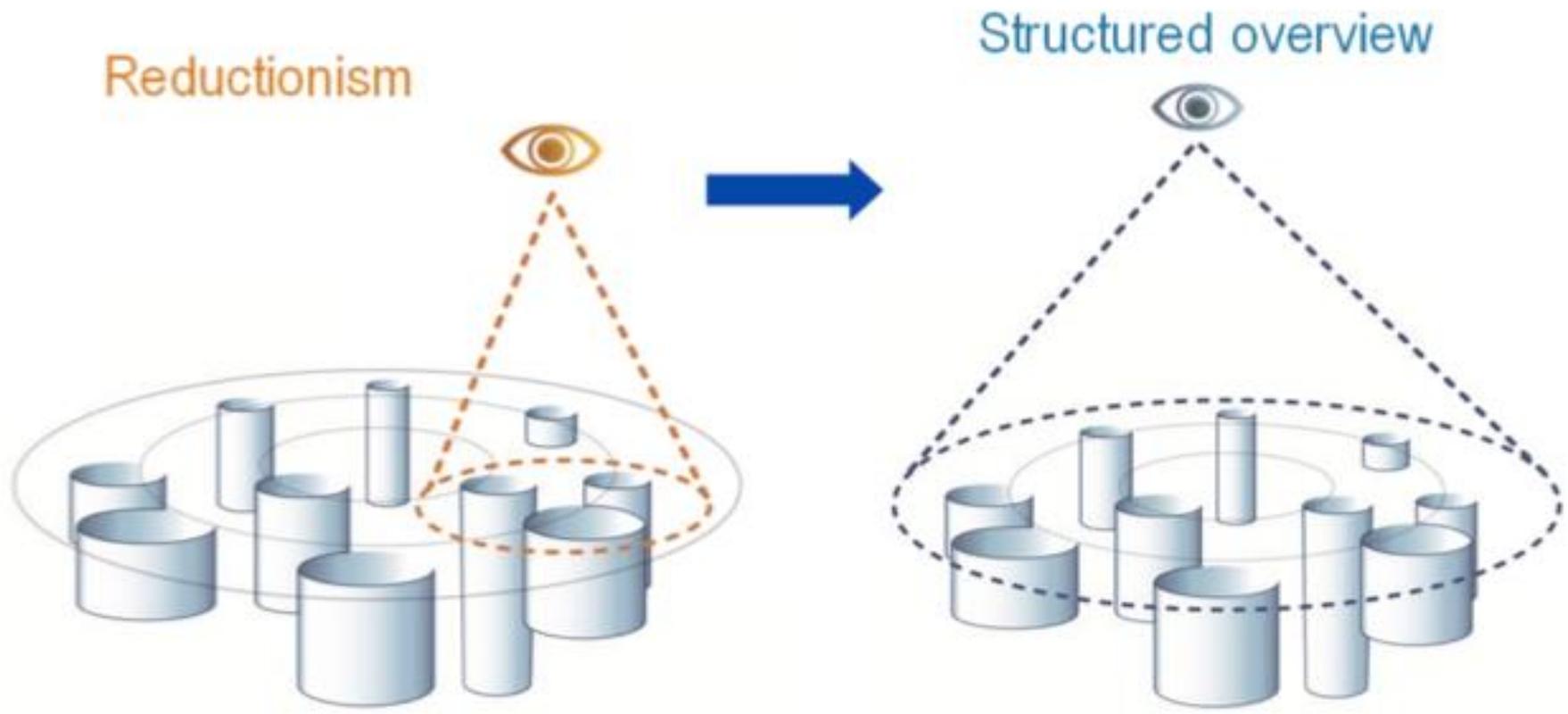
75 restaurants, all in Sweden

3,000 employees

Since 2003, Max has tripled its size, quadrupled its revenue, and quintupled its profits

Received several sustainability-related awards in 2008 and 2009

# To conclude



# To conclude

*Our greatest challenge is not...*

*Climate change, pollution, deforestation, declining fresh-water tables, shrinking phosphate reserves, poverty, terrorism, financial crisis, greed.*

*Our greatest challenge is that...*

***OUR LEADERS DO NOT LEAD***

*Prof. Karl-Henrik Robèrt*

