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**June 21, 2011 (Tuesday)      55<sup>th</sup> EOQ Congress**

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**CONCURRENT SESSIONS**  
**KEMPINSKI HOTEL CORVINUS**

**Tuesday 13:30 – 17:30**  
**Erzsébet tér 7-8, Budapest V.**

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**SALON REGIOMONTANUS**

**Tuesday 13:30 – 15:00**

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**15.1. CORPORATE SOCIAL RESPONSIBILITY AND SUSTAINABLE DEVELOPMENT I.**

**Session Chair:** *Alexandros Antonaras, University of Nicosia, Cyprus*

**14.10 How the Construction Industry is Able to Build a Sustainable World**

*Joal Teitelbaum, Best Home, Teitelbaum Engineering, Brazil*

**Teitelbaum, Joal** (Brazil), Member of the International Academy for Quality (IAQ)

Civil Engineer graduated at UFRGS-Brazil in 1960; next year he founded own firms being their President, acting at construction, design, planning, management, consulting and environment on the civil engineering field. His organization is the only Brazil's construction firm considered "World Class" as a winner of the National Quality Award, 2003. He also received all levels recognition of the Quality and Productivity Program – bronze, silver, gold and diamond -, five awards from National Industry Confederation of Brazil for its process in sustainability and environment, as well as several other awards and medals.

In his institutional activities Joal Teitelbaum was vice-president and he represented the Brazilian Chamber of the Construction Industry from 1978 to 1995 at the Inter American Federation and the World Confederation of the Construction Industry and from 1991 to 1995; he represented the Construction Industry at the Brazilian Program of Quality and Productivity. In 1996 he was elected President of the Brazil-Chile Chamber of Commerce and Industry and of the South America Integration Routes Committee, being President from the two organizations until today. In 2010 he became also International Vice President of the Superior Council. Since 2007 he is one of the three Brazilians that are Academicians at the International Academy for Quality (IAQ).

Joal Teitelbaum has more than 300 works published in books, essays, magazines, newspapers, related to construction industry, management, quality, governance, sustainability, innovation, social responsibility, some of them at the Congress Library. He has been keynote speaker in many Conferences worldwide.

55th EOQ CONGRESS, BUDAPEST, HUNGARY

“WORLD QUALITY CONGRESS”

“NAVIGATING GLOBAL QUALITY IN A NEW ERA”

QUALITY IN THE CONSTRUCTION INDUSTRY

## HOW THE CONSTRUCTION INDUSTRY IS ABLE TO BUILD A SUSTAINABLE WORLD

*IN OTHER WORDS, THE WELFARE OF OUR PLANET*

JOAL TEITELBAUM, c.e.

June, 21-23rd 2011 – Budapest, Hungary

Your power supply is important. How often do you consume animal products (meat, fish, eggs, dairy) ?

How many kilometers do you drive in your car weekly (average) ?

Among the foods that you normally consume, what amount is pre-prepared, packaged or imported ?

How much time do you travel by plane annually ?

Do you have any idea of how much waste do you produce ?

How much does your car consume to drive 100 kilometers ?

How many people live in your house ?

What is the size of your house ?

Are you always with someone when driving your car ?

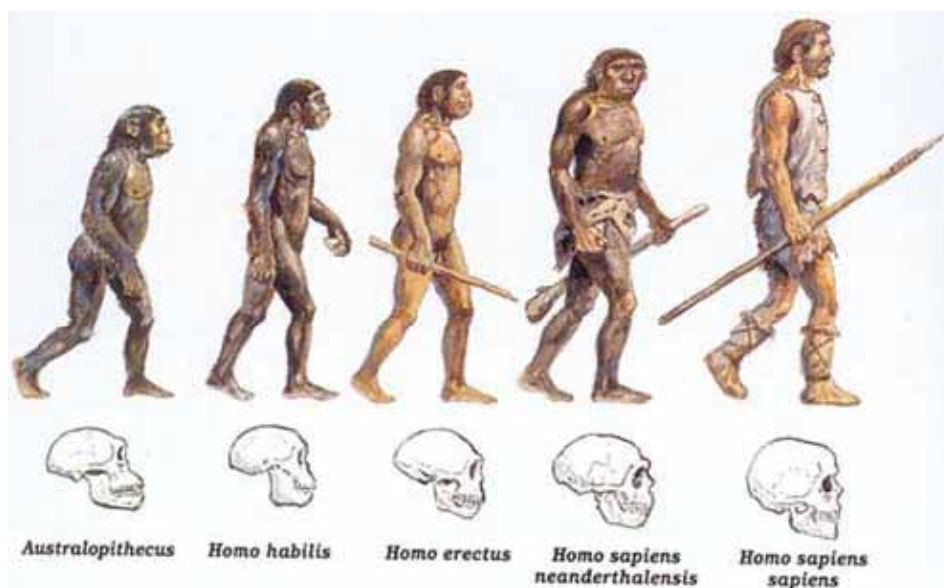
What kind of house is your home ?

Do you have electricity at home ?

# WHO BUILT THE CONFORT ZONE?



## CREATION + EVOLUTION + INNOVATION+CHANGES





## THE PLANET EARTH AND ITS DEPENDENCY ON THE CONSTRUCTION INDUSTRY

PHYSICAL INFRASTRUCTURE  
ENERGY  
COMMUNICATIONS  
HOUSING AND SANITATION  
ENVIRONMENT PROTECTION and so far  
WITHOUT LIMITS

## PRIOR FACTORS CONDUCT TO SUSTAINABILITY



## FIFTY YEARS OF EXPERIENCY



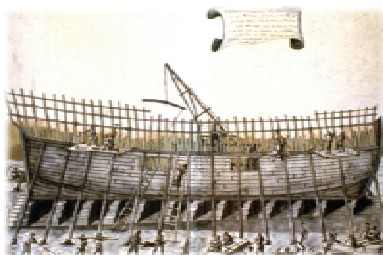
**INOCON**  
Construction Innovation

**CONSERVE**  
Construction Serving Environment

**PCD**  
Continuous Developing Process



## THE LAST 200 YEARS OF THE CONSTRUCTION INDUSTRY



# FROM EMPIRIC PROCESSES UNTIL TO BE A COLUMN OF HARMONIC DEVELOPMENT THROUGH SQI – STRUCTURED QUALITY INNOVATION

$$CISQI = \{(I + S) \cdot P\} : W \leq 100$$

Where:

CISQI = Construction Industry Structured Quality Innovation

I = Innovation Component

S= Sustainability Component

$I + S = 100$

P= Productivity Factor  $\leq 1$  (0.98 to 1,00 our parameter)

W = Waste Factor  $1 < 1.05$  (1.01 to 1,02 our parameter)



## HOW IMPORTANT IS THIS EQUATION?

Innovation is a market factor and Sustainability we may say that is a Responsibility Factor.

Productivity is a Competitiveness Factor and Waste is a Management Factor.

For example:  $P = 95$        $W = 1.08$

$CISQ = \{(30 + 70) \times 0.95\} : 1.08 = 87.96$

Comparing with a Maximum of 100 points that means a loss of 12.04 points or 12,04%.

Who will pay for this? The Entrepreneur and the Customer pocket as well as the Planet Earth



## TO KEEP IN MIND

**INFINITE DESIRES VERSUS FINITE NATURAL RESOURCES**

**RESOURCES: HOW MANY PLANET EARTHS SHALL WE NEED?**

**THE MAGIC WORD IS NOT ONLY RECYCLING**

**THERE MUST EXIST A RATIONAL AND PERMANENT ALERT  
AGAINST WASTE**

**A WIN TO WIN GAME**



**JOAL TEITELBAUM**  
DIRECTOR GENERAL DE INGENIERÍA



## CONSTRUCTION INDUSTRY : A PRESENT AND FUTURE FORCE THROUGH PRIVATE AND PUBLIC SECTORS

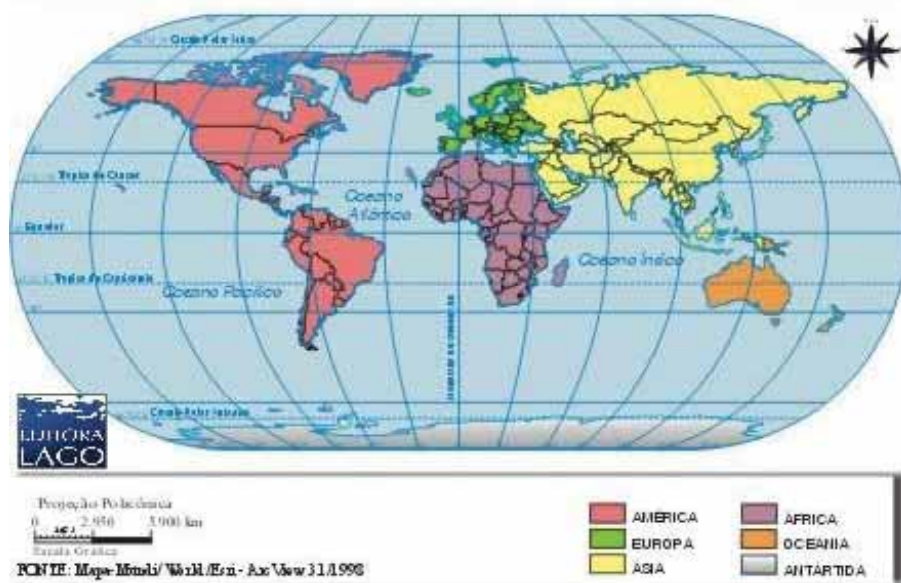


**JOAL TEITELBAUM**  
DIRECTOR GENERAL DE INGENIERÍA



## THE MYTH OF OVERPOPULATION

■ 50 X 70 Km=3.5 billions m<sup>2</sup>



Your power supply is important. How often do you consume animal products (meat, fish, eggs, dairy)?

**Frequently. Meat once or twice a week**

How many kilometers do you drive in your car weekly (average)?

**500 km or more**

Among the foods that you normally consume, what amount is pre-prepared, packaged or imported?

**Almost every food**

How much time do you travel by plane annually?

**25 hours**

Do you have any idea of how much waste do you produce?

**I produce a lot of waste and don't recycle it**

How much does your car consume to drive 100 kilometers?

**9.5-12 liters**

How many people live in your house?

**One person**

What is the size of your house?

**90-120 square meters**

Are you allways with someone when driving your car?

**Ocasionalmente, around 25%.**

What kind of house is your home?

**Apartment**

Do you have electricity at home?

**Yes**

If your answers are mostly like these and **if all of us had a footprint like that, we would need 9,9 Earths to live and survive !!!**



**QUALITY OF LIVING AND QUALITY OF LIFE : THE AIM OF THE CONSTRUCTION INDUSTRY SHOULD BE:**

**THE QUALITY AT THE CONSTRUCTION INDUSTRY IS THE INTANGIBLE FORCE THAT MAKES A BETTER WORLD TANGIBLE**

$$\text{CISQI} = \{(I + S) \cdot P\} : W = 100$$



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**presidencia@teitelbaum.com.br    www.teitelbaum.com.br**

THIS PRESENTATION WAS BUILT WITH THE SUPPORT OF THE QUALITY AND CUSTOMER RELATIONSHIP DEPARTMENT OF JOAL  
TEITELBAUM ENGINEERING, DIRECTED BY CLAUDIO TEITELBAUM

**THANK YOU**

June, 21-23rd 2011 – Budapest, Hungary