ErgoSustaiNomics: Making a synergistic collaboration between Marketing and Design

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Introduction

My Background and Framework

New Paradigm
introduction

IRAN
Publication studies & works
Portugal

IRAN

Population: 82 Million
Area: 1,648,195 km²
introduction

Population: 12.5 Million
introduction
Research Methodology in Design
Ergonomics in Manual Material Handling systems
Urban Ergonomics
Ergonomic City
New paradigm
introduction

IRAN
Publication
studies & works
Portugal

New paradigm
introduction

IRAN
Publication
studies & works
Portugal

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introduction
KANSEI Design for Kitchen Utensils
Auxiliary device for sport
introduction

IRAN Publication studies & works Portugal

New paradigm

Food Box for Parkinsons
introduction

IRAN
Publication
studies &
works
Portugal

New paradigm
How to achieve **successful business** throughout design?

How to achieve **successful design** throughout business?
If a product isn’t USEFUL to someone,

Why would you want to bring it to market?

If a product isn’t USABLE to someone,
New paradigm

New Paradigm

Ergonomics

Marketing

Design

Sustainability
Marketing + design

New paradigm

introduction

Sustainability

Ergonomics

Marketing

Design
WHAT IS MARKETING?

Marketing is the process of planning and executing the conception, pricing, promotion, and distribution of ideas, goods, services to create exchanges that satisfy individual and organizational goals.

American Marketing Association
Ergosustainomics

- Competition
- Purchasing

Marketing + Design

New paradigm

Introduction
Ergosustainomics

New paradigm

Marketing + design

Sustainability

Ergonomics

introduction

Design

Marketing
IEA: Ergonomics (or human factors) is the scientific discipline concerned with the understanding of interactions among humans and other elements of a system, and the profession that applies theory, principles, data and methods to design in order to optimize human well-being and overall system performance.
The estimated direct workers’ compensation costs in the United States for the most disabling workplace injuries and illnesses in 2006 were $48.6 billion, according to the 2008 Liberty Mutual Workplace Safety Index.

Ergoweb estimates the total cost for ergonomics-related injuries in the Index at $30.9 billion

www.ergoweb.com
LBP- Low back pain is known as one of the main factor of costs based on employees’ work absence.
In the United Kingdom, low back pain causes more than 100 million workdays lost per year.
In Sweden, LBP causes work days lost from 7 million in 1980 to 28 million by 1987.
In the United States, work days lost based on LBP is about 149 million per year, and its costs estimated to be US$ 100 to 200 billion a year.

WHO (Report: Priority diseases and reasons for inclusion)
Standing Position  Sitting Position

lumbar region of the spine
ERGONOMICS IS ECONOMICS
New paradigm introduction

Sustainability + design

Marketing & design
Ergonomics
Sustainability

SOCIETY
ECOLOGIC
ECONOMIC

SUSTAINABILITY
introduction

New paradigm

Marketing + design
Ergonomics
Sustainability
Ergosustainomics
A Sustainable system is an Ergonomic system?

An Ergonomic system is a Sustainable system
A Sustainable workplace is an Ergonomic workplace.

An Ergonomic workplace is a Sustainable workplace.
A Sustainable product is An Ergonomic Product

An Ergonomic Product is a Sustainable product
SUSTAINABILITY

New paradigm introduction

Marketing + design
Sustainability
Ergonomics

SUSTAINABLE

ERGONOMICS

ERGOSUSTAINABILITY

SUS-
New paradigm

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Sustainability

Marketing + design

Ergonomics

Ergosustainomics

Cultural Ergo.

MicroErgo.

CognitiveErgo.

Env.Ergo.

Ergonomics

Economic

Sustainability

Social

Economics
New paradigm introduction Sustainability Marketing design Ergonomics Ergosustainomics
New paradigm introduction

Sustainability + design

Ergosustainomics

Ergonomics

Sustainability
New paradigm

ERGONOMICS & SUSTAINABILITY

Definition & Scope

Ergonomics
Sub-braches & parts

Sustainability
Sub-braches & parts

sub-braches & parts
ERGONOMICS

New paradigm

introduction

Marketing + design
Ergonomics
Sustainability
Ergosustainomics

ERGONOMICS

MICRO-

MACRO-

CULTURAL

ENV.

COGNITIVE

QUANT.

QUALIT

QUANT.

QUALIT

QUANT.

QUALIT

QUANT.

QUALIT

QUANT.

QUALIT

QUANT.

QUALIT

organization

workplaces

product

organization

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Ergonomics Branches?

- Environmental Ergonomics (Env.Erg)
- Cognitive Ergonomics
- Cultural Ergonomics
- Macro-Ergonomics

Sustainability?

- Social
- Economics
- Ecologics
Marketing

Design

1+1=2

ERGONOMICS

Sustainability

Marketing

Design

1+1=2
Ergosustainomics

introduction

New paradigm

Marketing & design
Ergonomics
Sustainability
Ergosustainomics

Ergonomics + Sustainability
Ergosustainomics
ECONOMICS EFFECTIVENESS OF ERGONOMIC INTERVENTIONS

IJIEPR

PubMed, EBSCO, Web of Sci. search
Keywords: ergonomics, economics

Preliminary search for relevant articles

EBSCO: 307
PubMed: 7
Web of Science: 30

Remove the non-related Titles = 257
Remove the non-related Titles = 4
Remove the non-related Titles = 18

articles for abstract reading = 50
articles for abstract reading = 3
articles for abstract reading = 12

articles were removed = 38
articles were removed = 2
articles were removed = 8

Screening by full text reading No: 12
Screening by full text reading No: 1
Screening by full text reading No: 4

Remove the non-related full text = 5
Remove the non-related full text = 0
Remove the non-related full text = 2

Articles included in the review = 8
Articles included in the review = 1
Articles included in the review = 2
According to reviewed papers, the role of ergonomics in green economics toward sustainability is inevitable.

However, there are some challenges to persuade the industrial sectors’ managers about the economics side of ergonomics in which limited documents and the lack of ergonomics-economics models and procedures are critical.
ERGONOMICS ON THE CONTEXT OF SUSTAINABILITY: A NEW PRODUCTION APPROACH TOWARDS THE QUALITY OF LIFE

PubMed & EBSCO search
Keywords: ergonomics, sustainability, product design

Preliminary relevant articles

EBSCO: 252
PubMed: 4

Remove the non-related Titles= 222
Remove the non-related Titles= 1

30 articles for abstract reading
3 articles for abstract reading

12 articles were removed

Screening by full text reading
No: 18
Screening by full text reading
No: 3

Remove the non-related full text= 9
Remove the non-related full text= 2

Articles included in the review= 9
(2 PubMed papers were similar to EBSCO)

Figure 3. The papers’ screening hierarchy
A holistic synergic System

Social aspects (I)

Green Design (G)

Cognitive Ergo. (H)

Ecology (A)

Micro-ergo. (F)

Sustainability

ErgoSustainability

Ergonomics

Env. Ergo. (C)

SocioTech. Aspects of Erg. (D)

Cultural-ergo. (E)

Marketing & Management (B)
IF YOU WANT TO SELL YOUR PRODUCT

ATTRACT YOUR CUSTOMER

EACH PRODUCT IS BEYOND ITS PHYSICAL CHARACTERISTICS & EACH PRODUCT HAS A HEART

IF YOU MAKING YOUR CUSTOMER FALLING IN LOVE WITH PRODUCT, YOU WILL WIN IN YOUR MARKET

HOW?

BY MAKING FALLING IN LOVE BETWEEN DESIGNER & MARKETING EXPERT

HOW?

ErgoSustaiNomic Approach
ErgoSustainomics: Making a synergistic collaboration between Marketing and Design
We are able to make a better life for our near future generation by:

\[
\text{design based marketing} \\
+ \\
\text{marketing based design} \\
= \\
\text{ErgoSustaiNomics}
\]
Tomorrows design is waiting for you

Tomorrows marketing is waiting for you

Shake hands with tomorrow

INDUSTRI 4.0 IS WAITING FOR YOUR IDEAS
Thank you for your attention