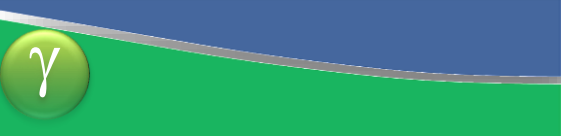




# Transportation and Society

Prof. Augusto Brasil





# Syllabus

História do Transporte e seu Papel no Desenvolvimento Econômico;

Introdução à Geografia dos Transportes; Transporte e Desenvolvimento

Urbano e Estruturação do Espaço Urbano; Transporte e Teoria da

Localização.

Apresentação, discussão de textos por grupos e seminários.

1. Transportes e sociedade: uma visão geral
2. História dos transportes no Brasil
3. Transporte e desenvolvimento
4. Transportes e atividades econômicas
5. População, migração e assentamentos
6. Espaço e economia urbana e regional
7. Transporte, ambiente e energia
8. O problema do deslocamento urbano e regional
9. Problemas de transporte e soluções
10. Estado e transportes
11. A evolução do planejamento de transportes

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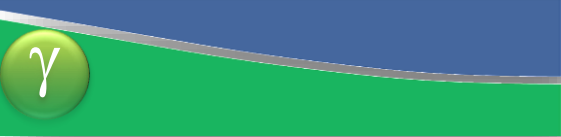
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# Syllabus



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## Evaluating Accessibility for Transport Planning Measuring People's Ability to Reach Desired Goods and Activities

Todd Litman

Victoria Transport Policy Institute



The Brooklyn Bridge provides mobility and access between Manhattan and Brooklyn.

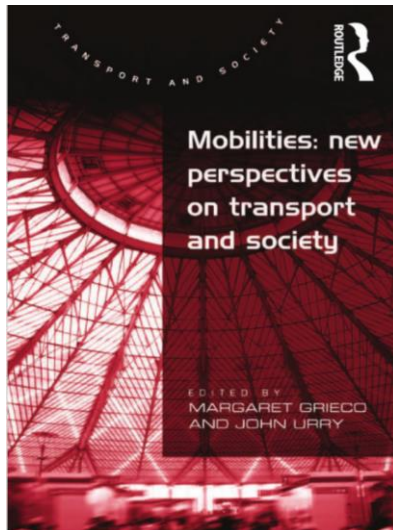
### Abstract

This paper discusses the concept of accessibility and how it can be incorporated in transport planning. Accessibility refers to people's ability to reach goods, services and activities, which is the ultimate goal of most transport activity. Many factors affect accessibility, including mobility (physical movement), the quality and affordability of transport options, transport system connectivity, mobility substitutes, and land use patterns. Accessibility can be evaluated from various perspectives, including a particular group, mode, location or activity. Conventional planning tends to overlook and undervalue some of these factors and perspectives. More comprehensive analysis of accessibility in planning expands the scope of potential solutions to transport problems.

A shorter version of this paper was presented at the 87<sup>th</sup> Transportation Research Board Annual Meeting ([www.trb.org](http://www.trb.org)), January 2008.

Todd Alexander Litman © 2007-2018

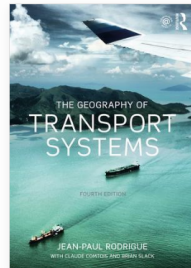
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## The Geography of Transport Systems

4th Edition

By Jean-Paul Rodrigue, Claude Comtois, Brian Slack

Routledge

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Transport Reviews, Vol. 24, No. 4, 485–509, July 2004



## Transport and Society<sup>1</sup>

GLENN LYONS

Centre for Transport & Society, University of the West of England, Bristol, UK

(Received 25 April 2003; revised 3 November 2003; accepted 12 January 2004)

**ABSTRACT** In 1963, the Buchanan Report in the UK advocated a combination of new road capacity, improved public transport and traffic restraint as a means to tackle congestion. Forty years on, and the advice from many transport experts remains the same. However, the scale and complexity of the problems associated with a mobility-dependent society have grown. The need for politicians to make tough but realistic policy decisions on transport is now becoming unavoidable. They must confront the realities of living with the car as must the general public. Policymakers now also have social well-being and sustainable development moving higher on their agendas alongside transport. Against such a backdrop, the paper makes the case for transport research, policy and practice to acknowledge more fully the inherent links between transport and society. It argues that greater recognition and understanding of such links is crucial to confronting the present realities. Transport does not merely serve society: it shapes society, as in turn society shapes transport. The future of each is dependent on the other, and this fact must be recognized. The paper advocates in turn that the transport profession must move from its heartlands in engineering and economics also to embrace more fully such disciplines as sociology and psychology. A factual picture of the many facets of present-day society is presented and the implications for travel demand are discussed. Through considering phenomena such as social norms and habitual behaviour, it is then argued that the travel choices and behaviour of individuals are not simply a matter of economic optimization. This points to the need for decision-makers to be furnished with better evidence about the transport problems faced and the potential efficacy of measures that might be taken. Discussion of public attitudes and the role of the media are included in the context of assessing how politicians can be encouraged and supported in their implementation of realistic but unpopular policies. Evidence and experience within the paper are UK based, although many of the issues and arguments apply world wide.

### Introduction

In 1924, the first white line was painted in a London street as an experiment to solve the traffic congestion problem, which was considered at that time to have become acute (Figure 1). Further back still, there were serious concerns that

Correspondence Address: Glenn Lyons, Centre for Transport & Society, Faculty of the Built Environment, University of the West of England, Frenchay Campus, Coldharbour Lane, Bristol BS16 1QY, UK. Email: Glenn.Lyons@uwe.ac.uk

Description Contents Authors Subjects

### Description

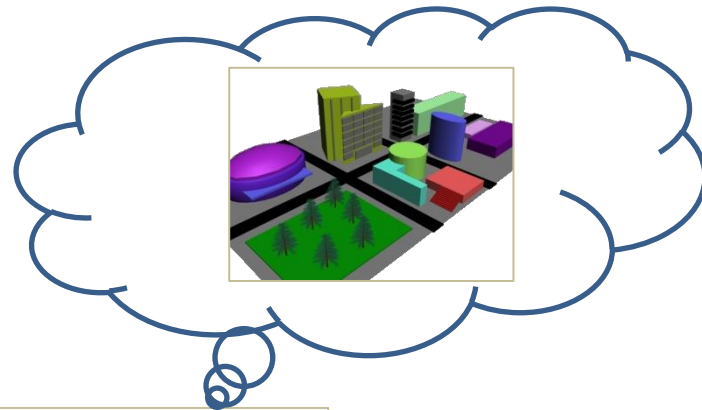
This expanded and revised fourth edition of *The Geography of Transport Systems* provides a comprehensive and accessible introduction to the field with a broad overview of its concepts, methods and areas of application. Aimed mainly at an undergraduate audience, it provides an overview of the spatial aspects of transportation and focuses on how the mobility of passengers and freight is linked with geography.

The book is divided in ten chapters, each covering a specific conceptual dimension, including networks, modes, terminals, freight transportation, urban transportation and environmental impacts, and updated with the latest information available. The fourth edition offers new material on the issues of transport and the economy, city logistics, supply chains, security, energy, the environment, as well as a revised content structure. With over 160 updated photographs, figures and maps, *The Geography of Transport Systems* presents transportation systems at different scales ranging from global to local.

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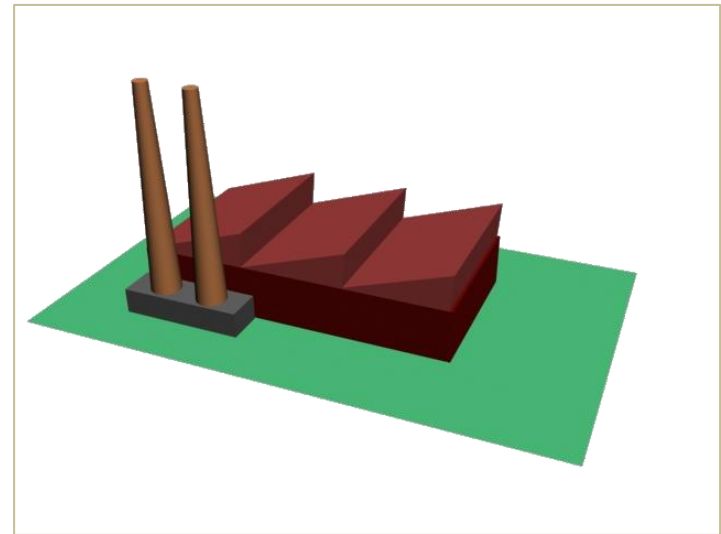
# ***INTEGRATED SUSTAINABILITY ASSESSMENT (premises)***

Social Expectations

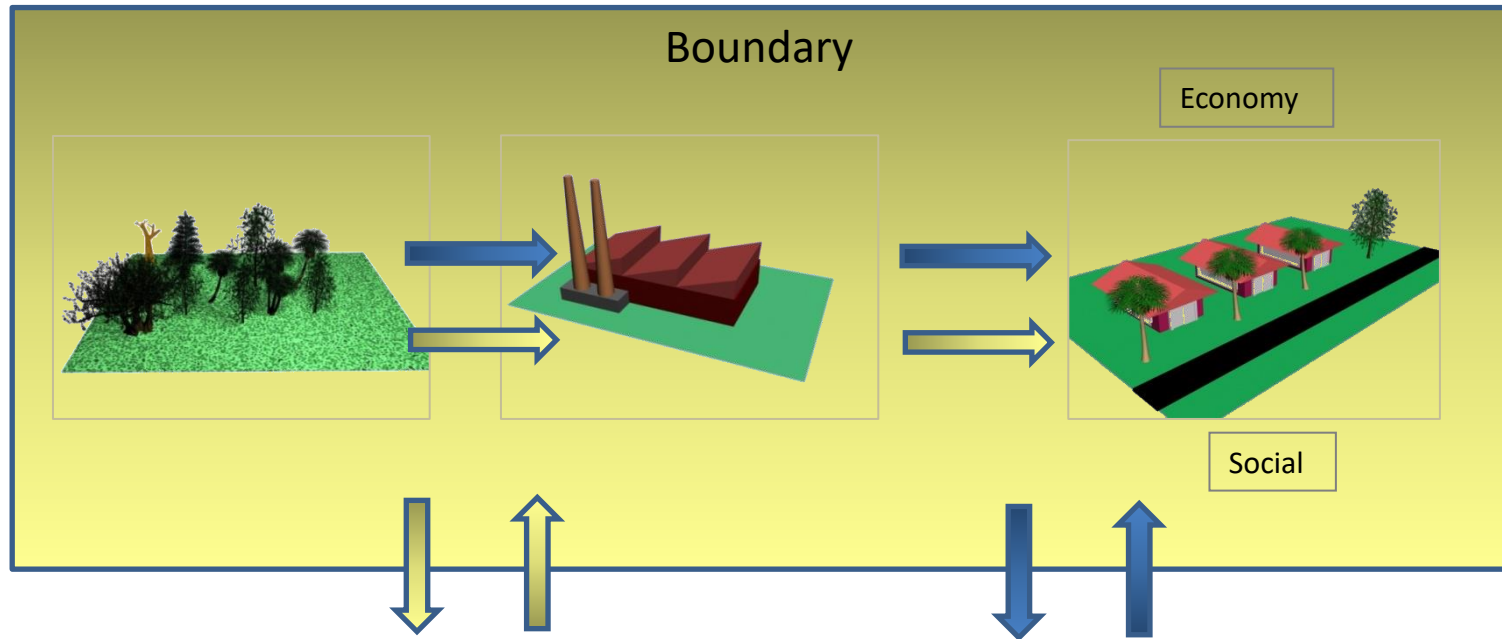


# ***INTEGRATED SUSTAINABILITY ASSESSMENT (premises)***

Natural resources use



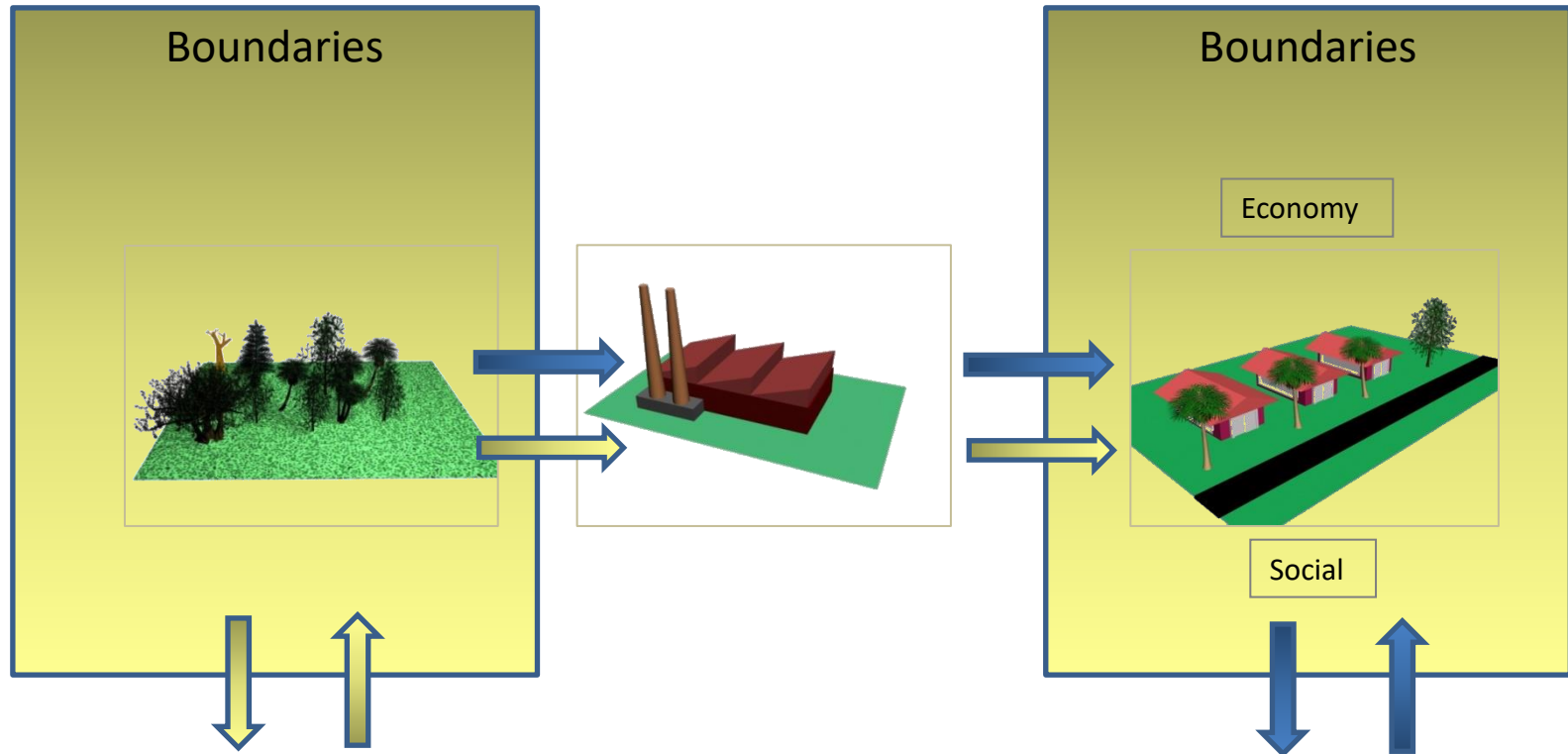
# ***INTEGRATED SUSTAINABILITY ASSESSMENT (premises)***



**Capital Flow**

Capital = Physical assets/Natural resources, Human (knowledge, skills)

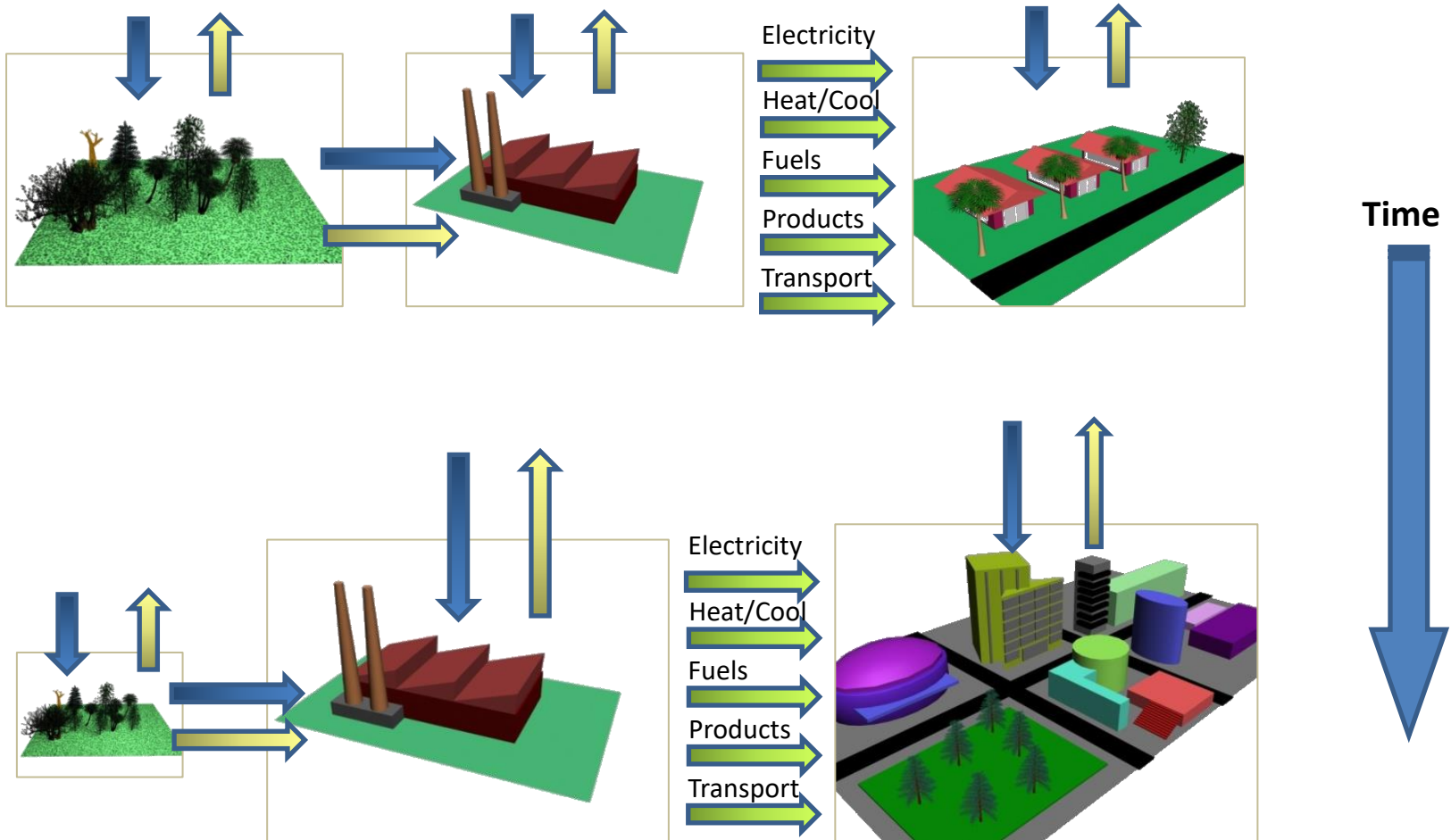
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**Capital Flow**

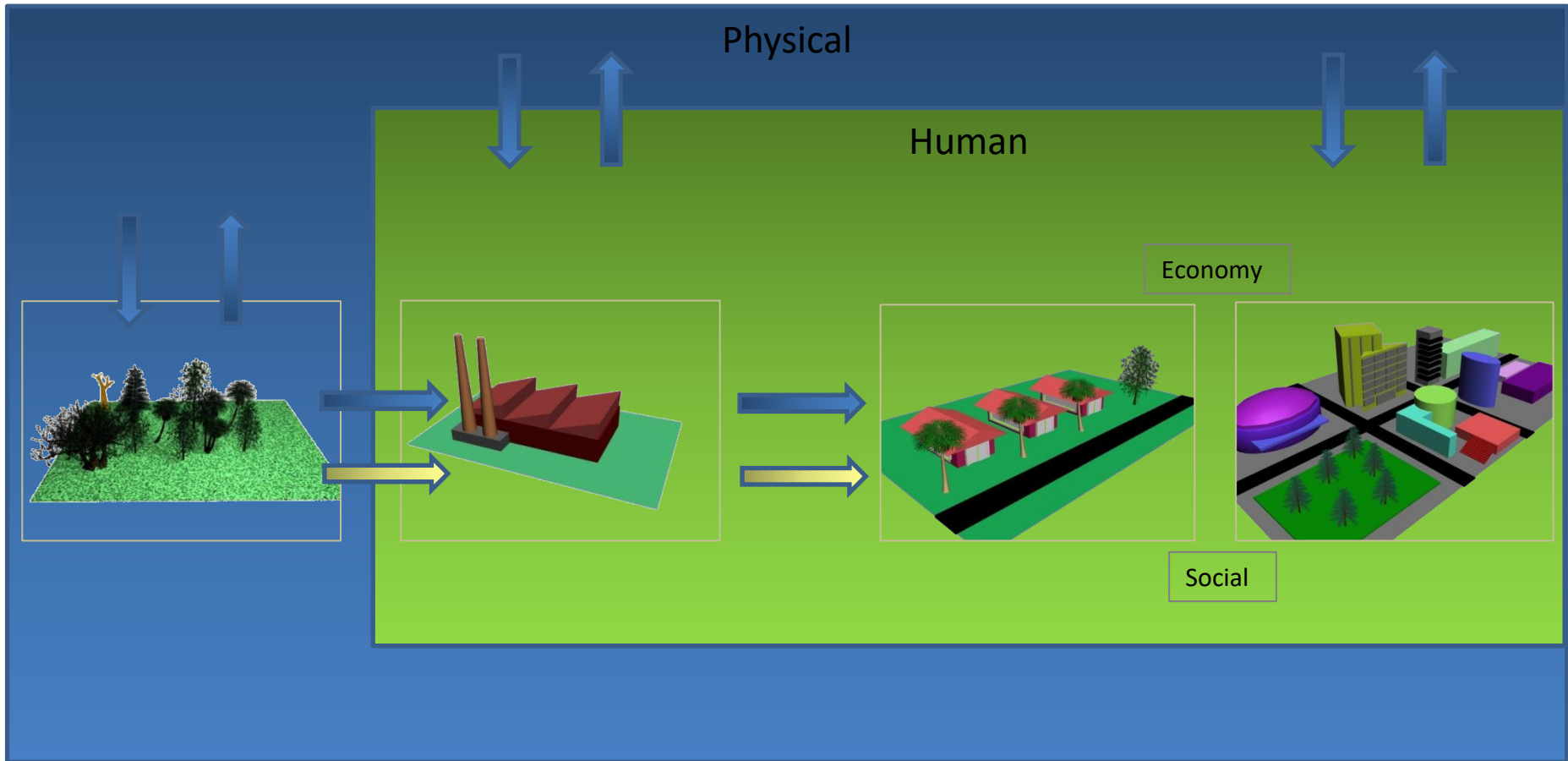
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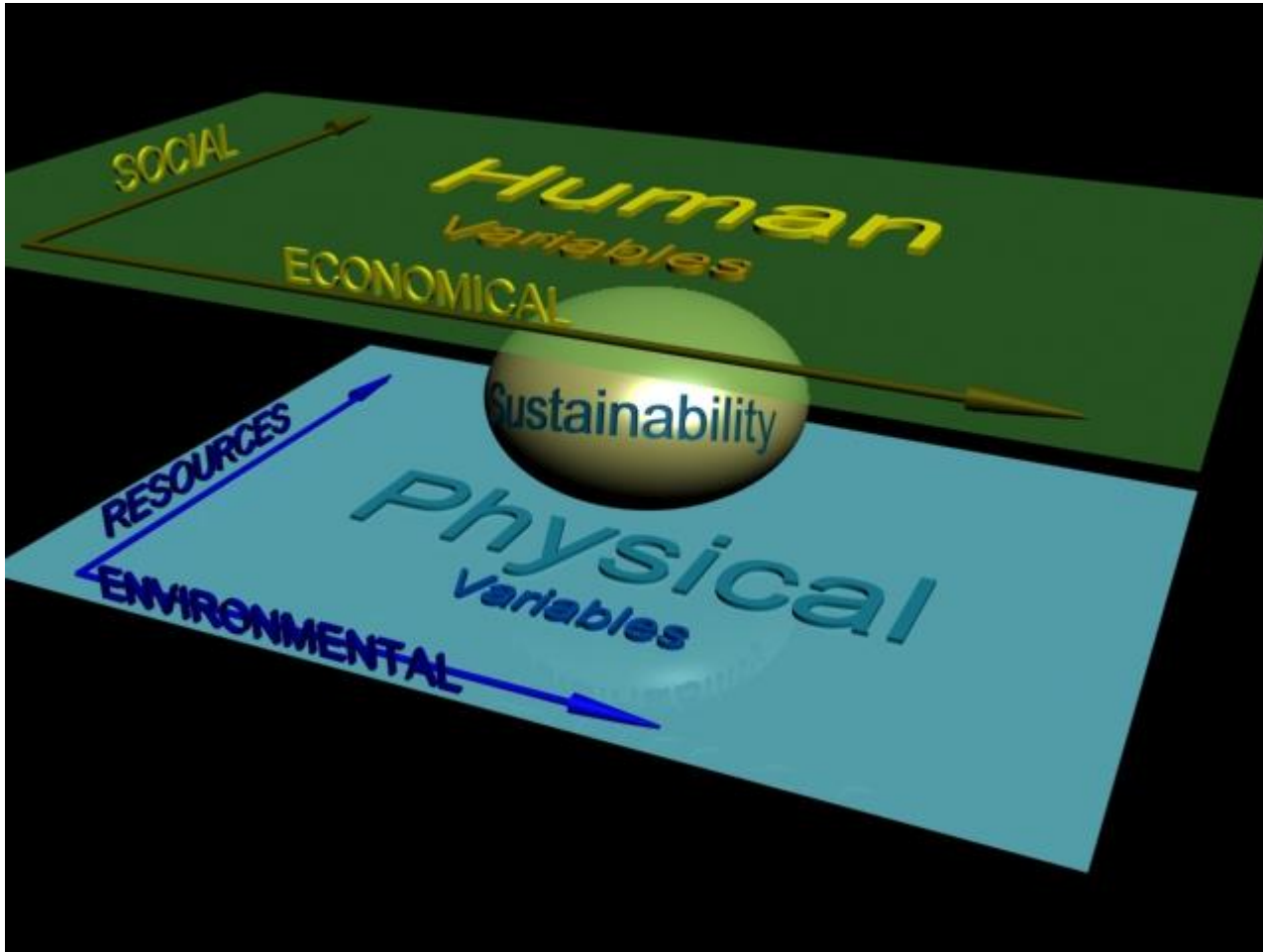




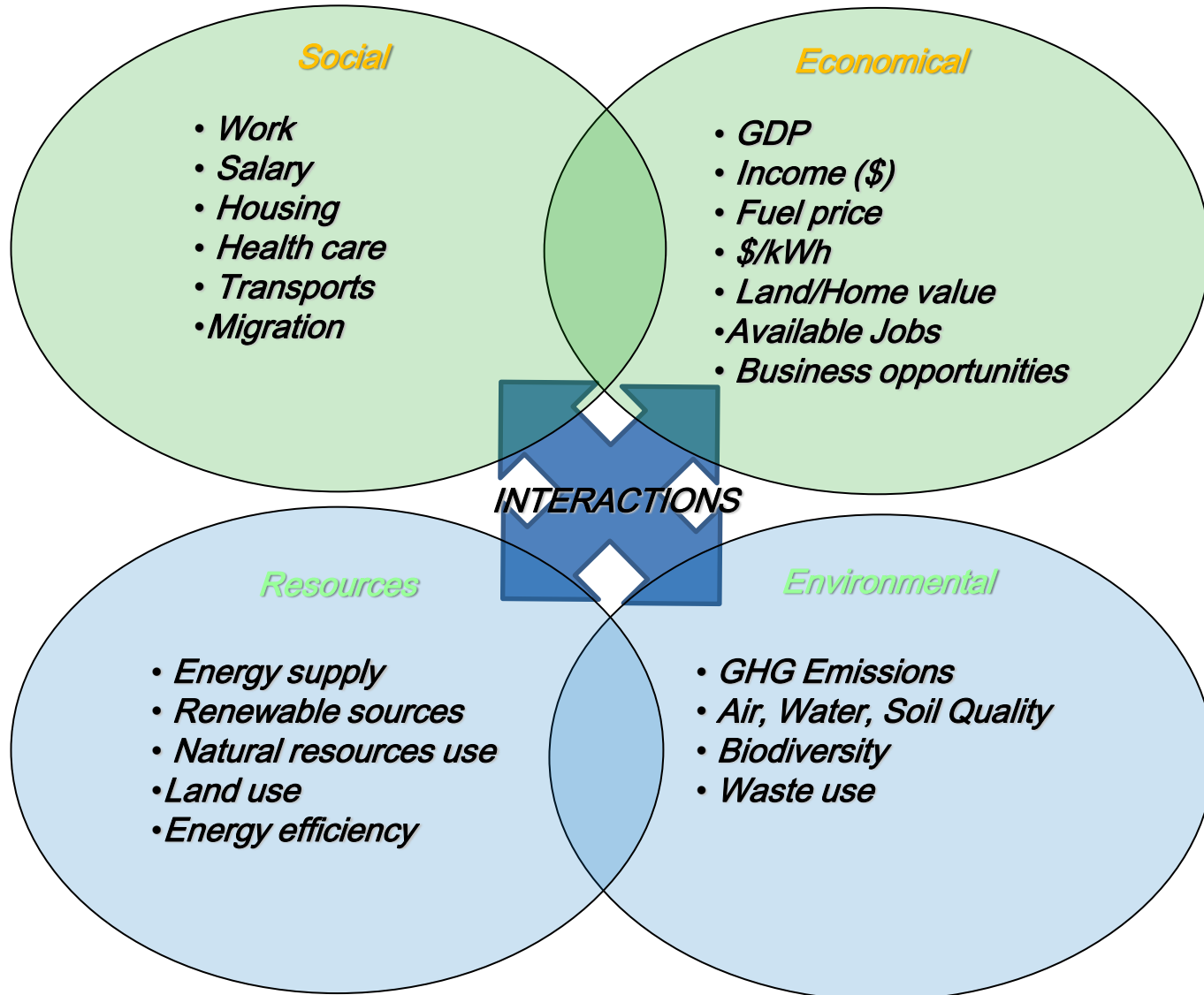
# *INTEGRATED SUSTAINABILITY ASSESSMENT (premises)*



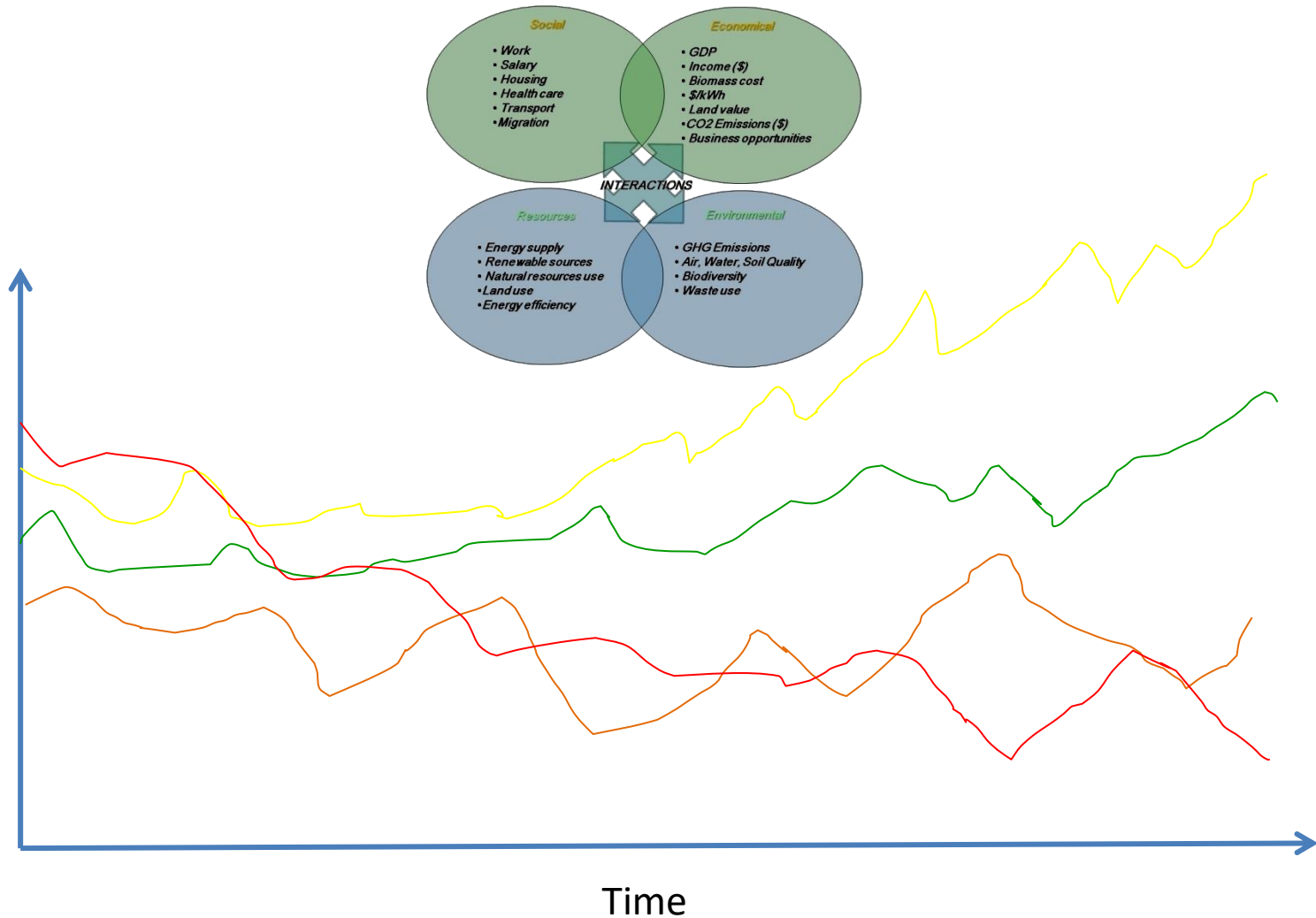
# *INTEGRATED SUSTAINABILITY ASSESSMENT (Variables)*



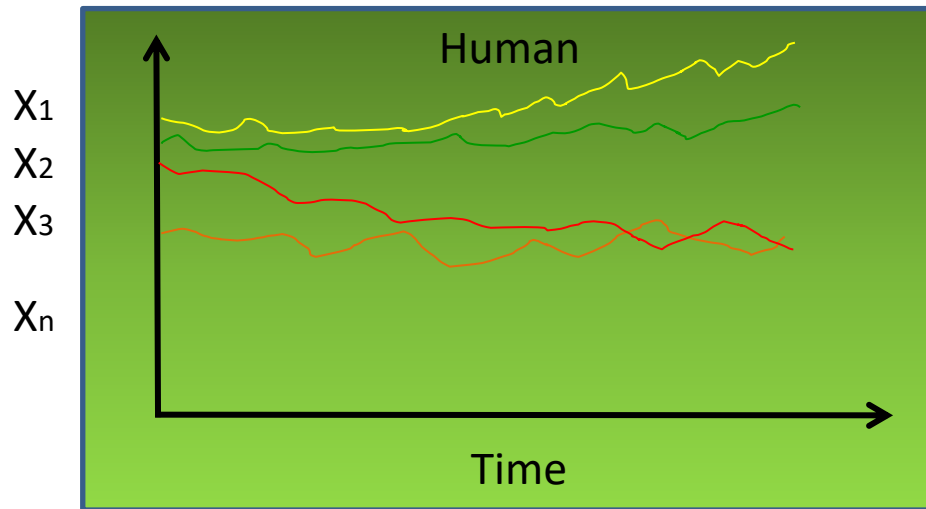
# ***INTEGRATED SUSTAINABILITY ASSESSMENT (Variables)***



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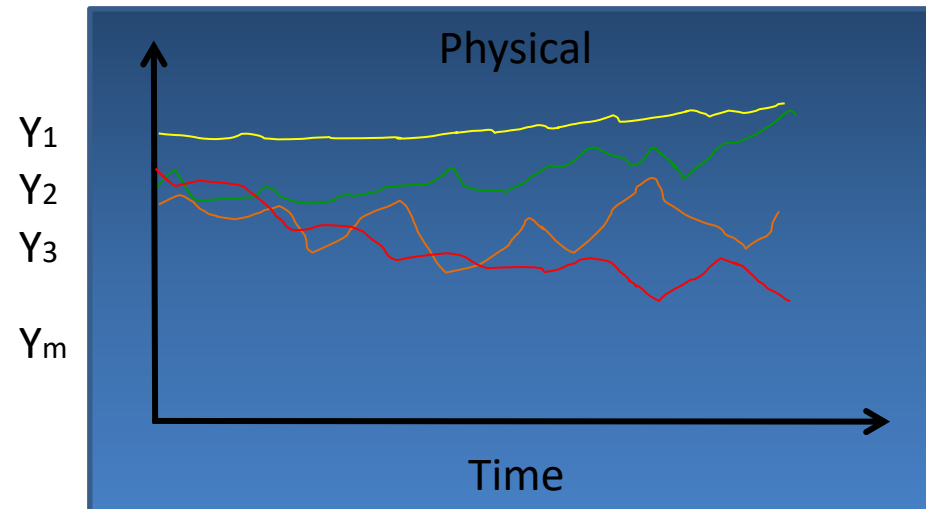


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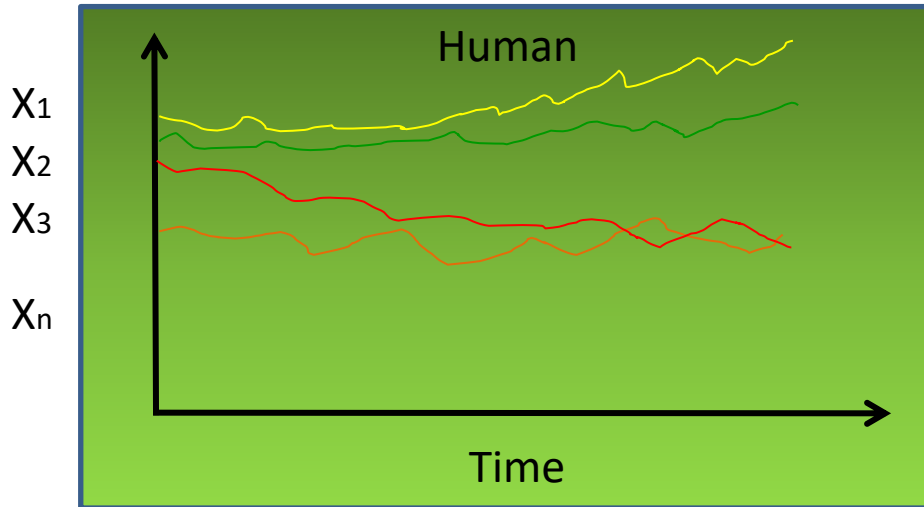


$$\text{Cov} \left( \sum_{i=1}^n X_i, \sum_{j=1}^m Y_j \right) = \sum_{i=1}^n \sum_{j=1}^m \text{Cov} (X_i, Y_j).$$

$$\frac{\partial X_i}{\partial X_j \partial Y_k \partial t} \quad \frac{\partial Y_i}{\partial X_j \partial Y_k \partial t}$$

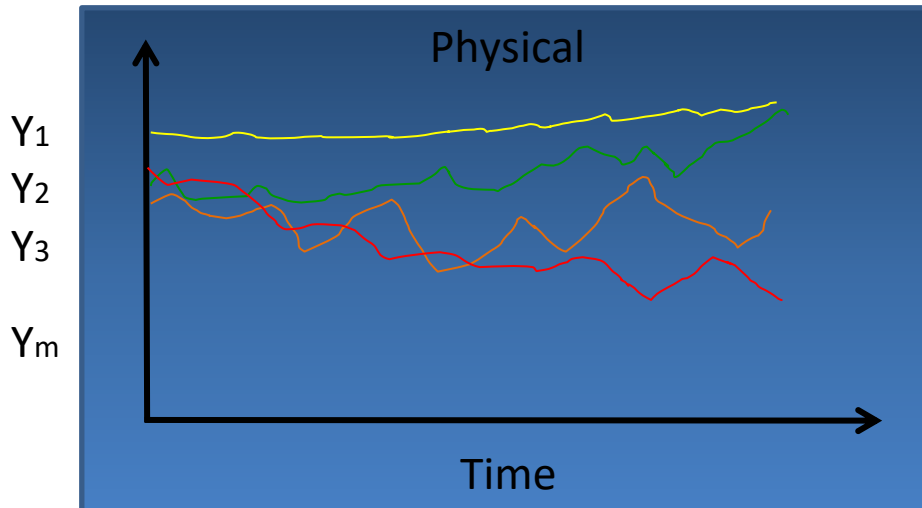


# *INTEGRATED SUSTAINABILITY ASSESSMENT (Output indexes)*

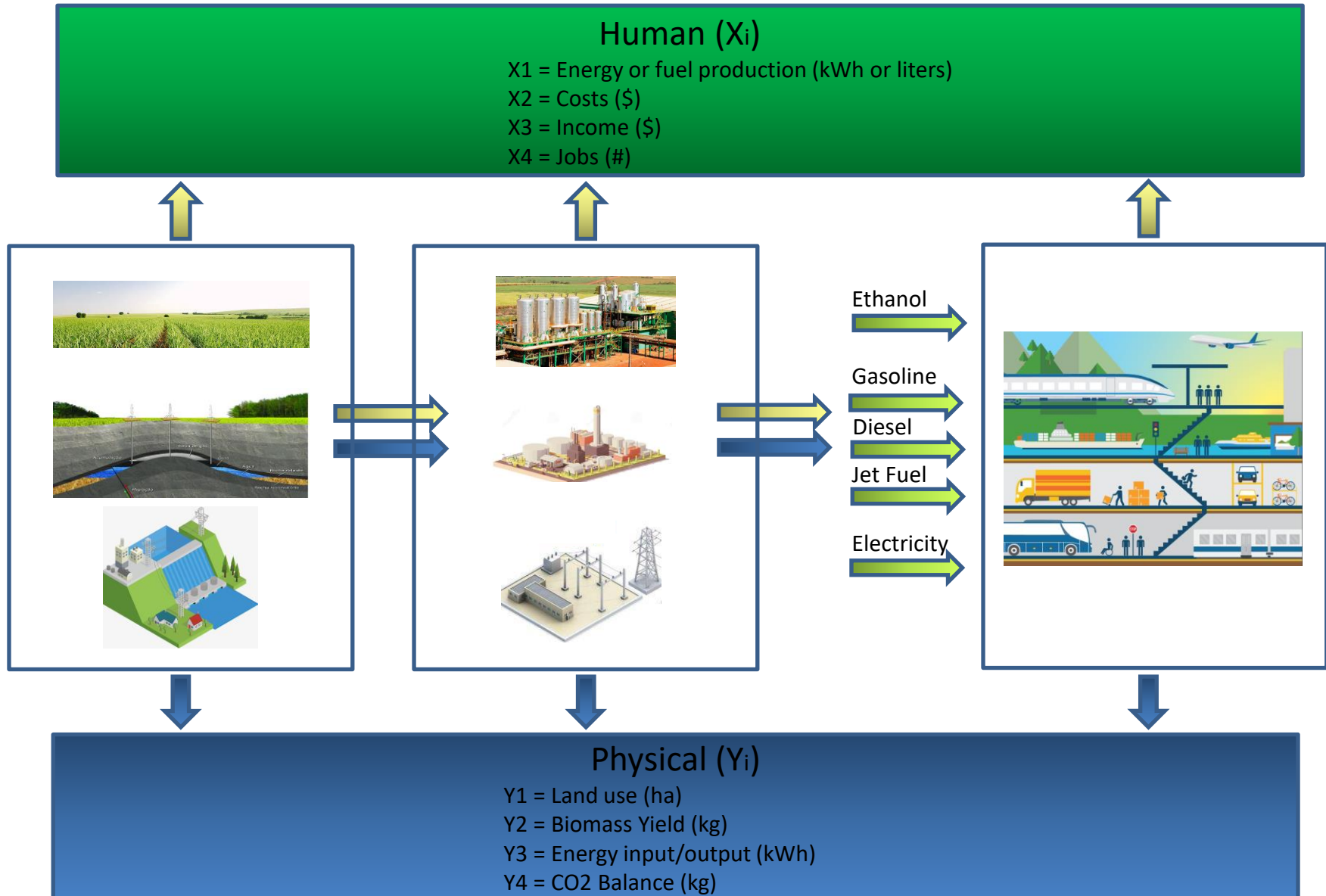


$$X_i = f(X_j, Y_k, t)$$

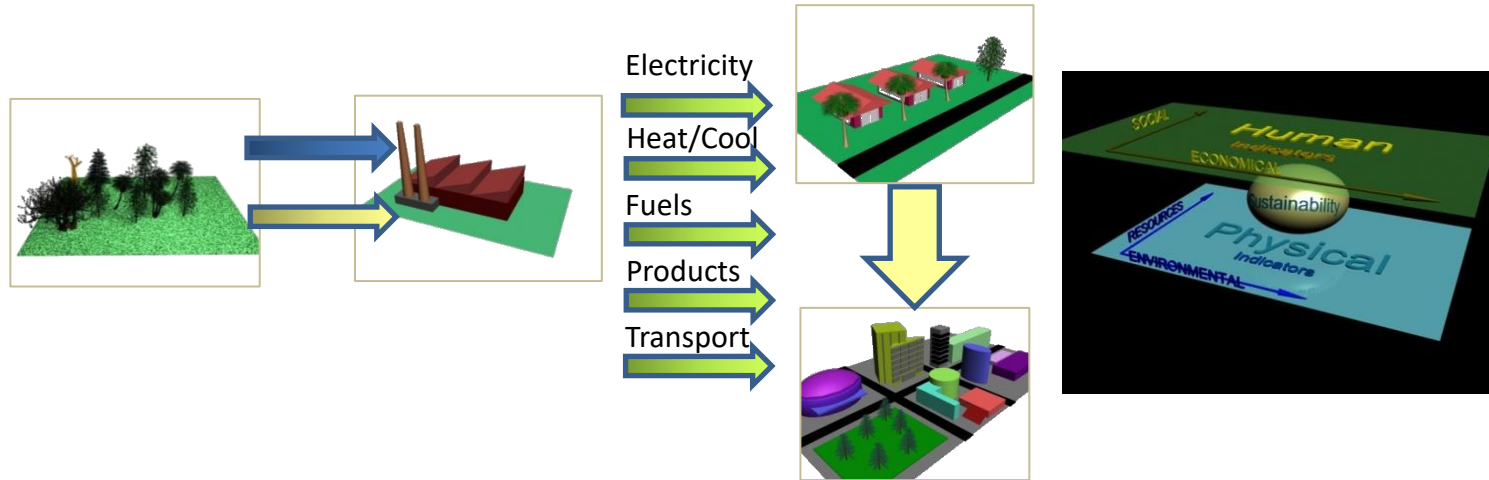
$$Y_i = f(X_j, Y_k, t)$$



# INTEGRATED SUSTAINABILITY ASSESSMENT (Energy for transports)



# INTEGRATED SUSTAINABILITY ASSESSMENT (Outputs)



## Indexes( $X_i/Y_j$ )

### VARIATIONS OF CAPITAL

$\Delta X_1 / Y_3$  = Energy or fuel produced / Fossil Energy input (kWh or liters/kWh)

$\Delta X_2 / Y_3$  = Cost of renewable energy / Energy output(\$/kWh)

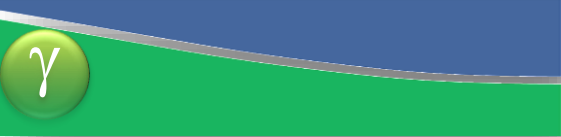
$\Delta X_3 / X_1$  = Income / Energy produced (\$/liters)

$\Delta X_4 / Y_1$  = Jobs / Land use (#/kWh or #/ha)

$\Delta Y_3 / Y_2$  = Energy Output / Biomass yield (kWh/ha)

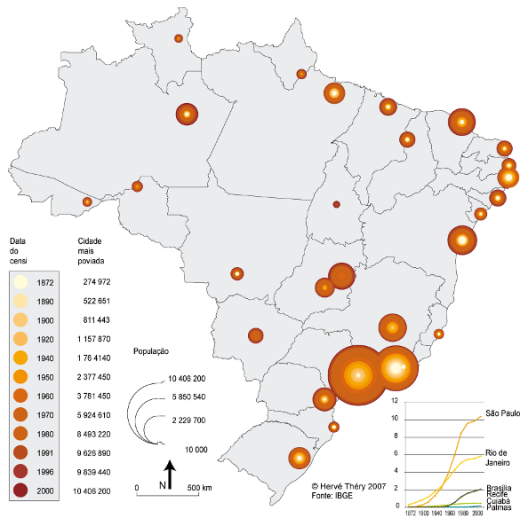
$\Delta Y_4 / Y_1$  = CO<sub>2</sub>/ Land use (kg/ha)





# History and Geography

## Crescimento das capitais



## CRESCIMENTO DA POPULAÇÃO NAS CIDADES Em valores absolutos, segundo censos

1872

