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### In Search of the Elements of an Intra-organizational Innovation System for Brazilian Automotive Subsidiaries



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## Topics

- **Introduction**
- The theoretical basis
- R&D centralization and decentralization: the roles of Brazilian subsidiaries in worldwide organizations
- Intermediate Technological Leadership
- The road-map to ITL: identifying the elements of an Intra-organizational Innovative System
- Conclusion



## What is the research context?

### Introduction

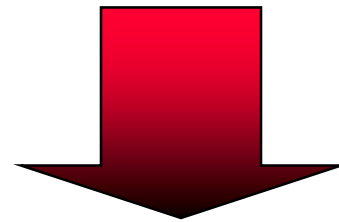
- New methods and technologies for Product Development
  - Legislative requirements;
  - Market needs;
  - New organizational strategies;
- Fast transformation of structures of Brazilian Automotive Subsidiaries
  - 90's Brazilian market opening;
  - Local market demands;
  - Involvement in product development programs;



## What is the research context?

### Introduction

Changes listed caused a need for a  
continuous preparation of local  
organizations



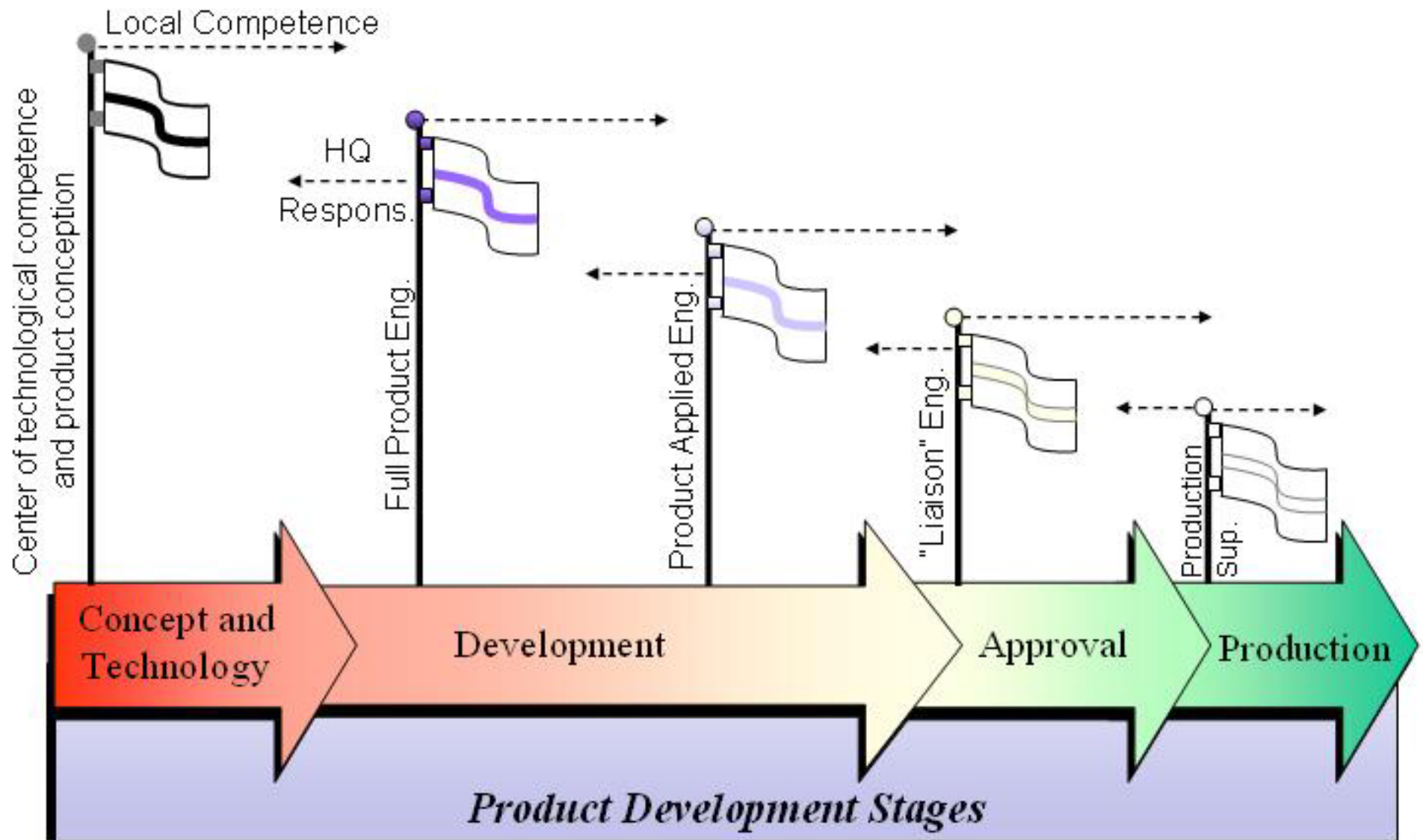
Inappropriate theoretical basis to drive the  
efforts of building competence in developing  
technological products



## Objective

### Introduction

To provide an appropriate theoretical basis to drive the efforts of building competence in developing technological products in Brazilian global automotive subsidiaries





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## Theoretical Basis

The theoretical basis for fulfilling the objective is fragmented in literature among studies on:

- New product development;
- Knowledge management and organizational learning;
- Organizational competences;
- Technological innovation.





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## Brazilian Automotive Industry

### R&D centralization and decentralization

- Began to adapt some foreign vehicles in the 60's.
- The 11<sup>th</sup> automobile world-wide producer and the first in South America;
- Competence to develop a complete vehicle in some subsidiaries;
  - General Motors do Brasil: one of the five development centers of GM group in the world.
  - Fiat's Brazilian product development center: the first one outside Italy.
  - Ford and Volkswagen: gradually more Brazilian engineers involved in international product developments.



## R&D local competence development

### R&D centralization and decentralization

#### Why decentralization?

- Contact with new knowledge and new technologies;
- Flexibility and agility for product adaptations;
- Lower development costs;
- Tax incentive;
- Requirement for local performance.



## R&D local competence development

### R&D centralization and decentralization

The success depends on:

- Its autonomous level within a worldwide organization;
- Local market characteristics
- Competitive strategy;
- Organizational structure;
- Products for local market;
- Proper management system;
- Internal and external infrastructure.



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## The Concept

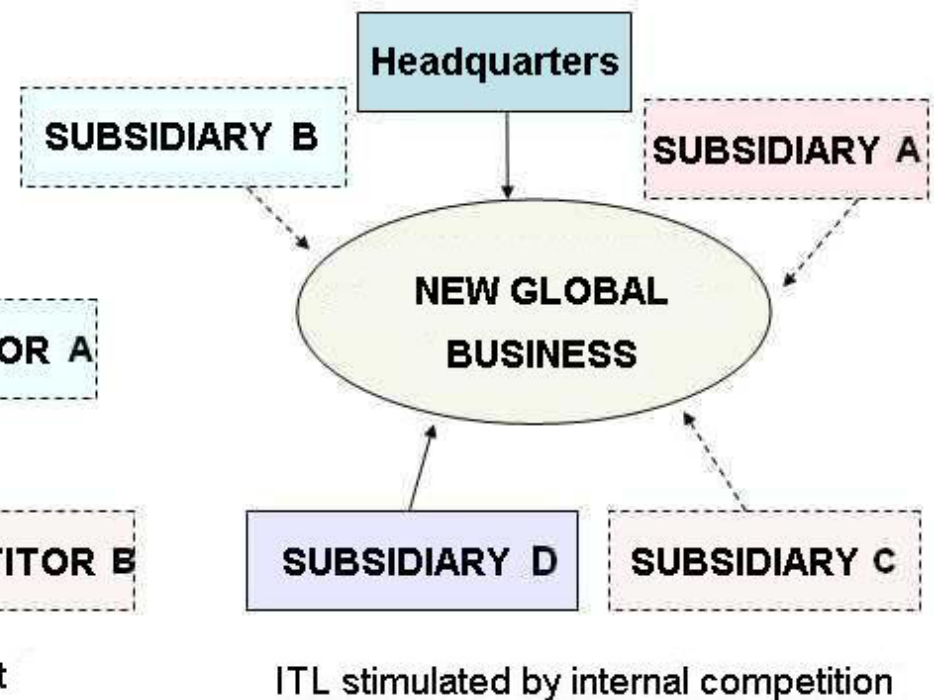
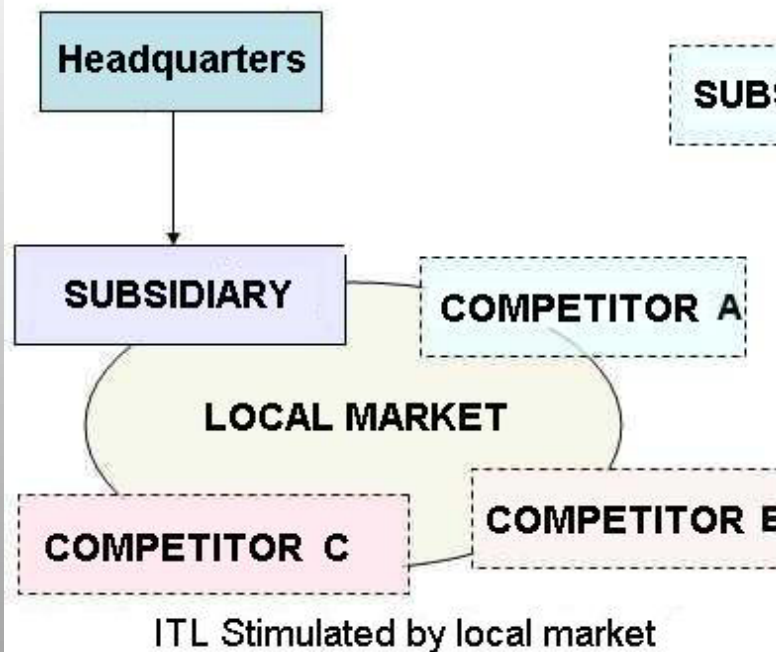
### ITL: Intermediate Technological Leadership

To be in search of Intermediate Technological Leadership consists of implementing a strategy to extend the local competence in product and technological development

The term “Intermediate” regards to the limited perimeter of this competence development that is focused on local and other market demands.



## ITL sub-categories

ITL: Intermediate  
Technological Leadership



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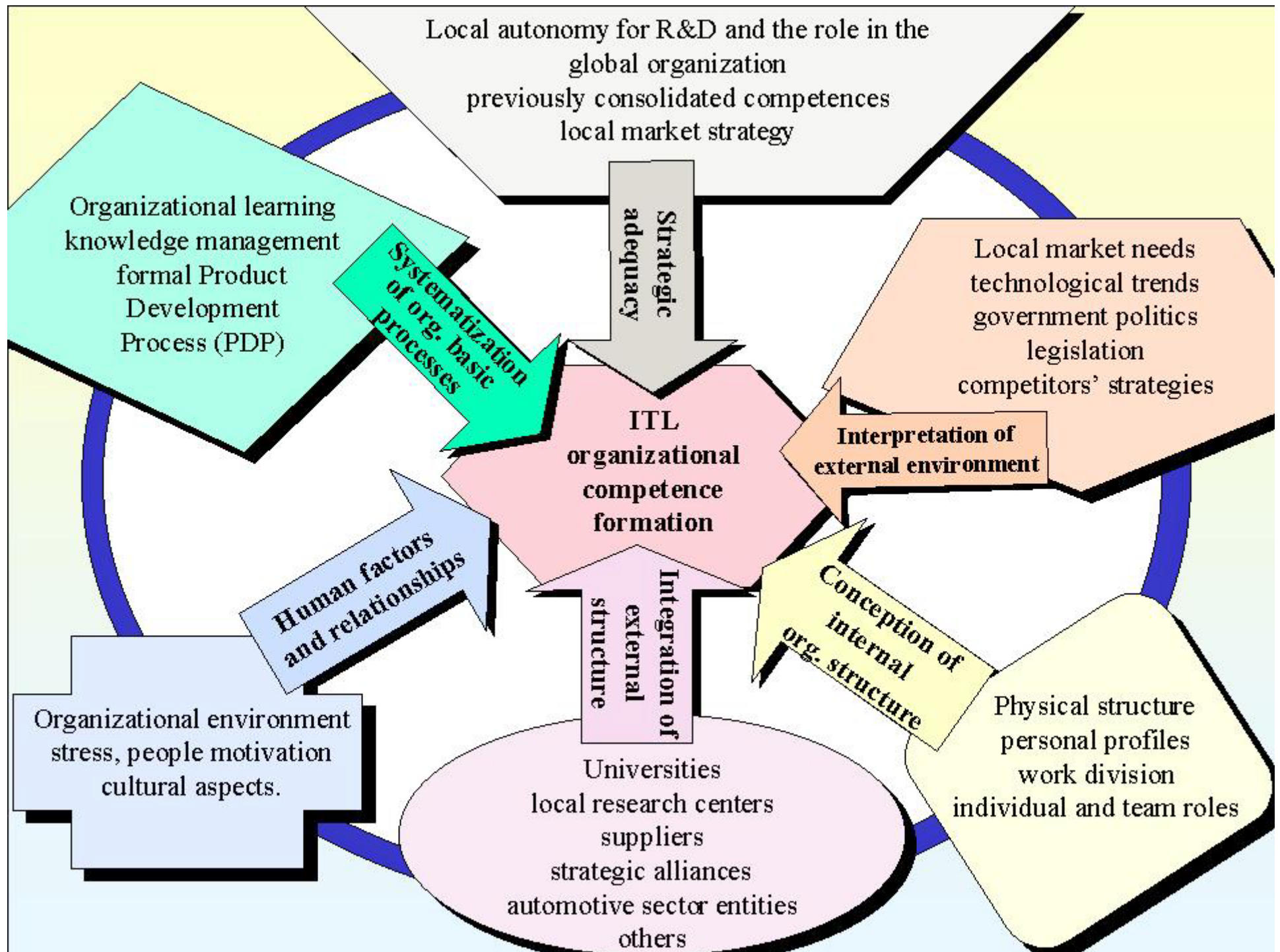


## Intra-organizational Innovative System (IIS)

### The road-map to ITL

A system which provides organizational accomplishment of ITL:

- Integrating different topics of the theoretical basis;
- Taking into account the industrial particular context.





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## Conclusion

- Changing competence stages in product development towards ITL is a trend in local automotive subsidiaries;
- This change includes the six pillars identified from the theoretical basis which should be integrated;
- Each organization demands a specific real system
- Achieving ITL brings social and economic relevance for developing countries.