Puebla Competitiveness Report

(Work in Process)

Building Fixtures, Equipment and Services (Metal Manufacturing)

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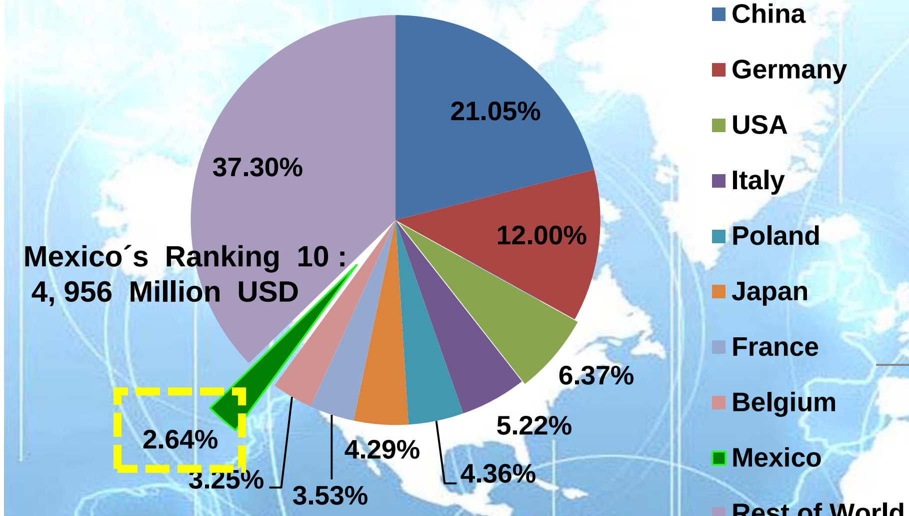
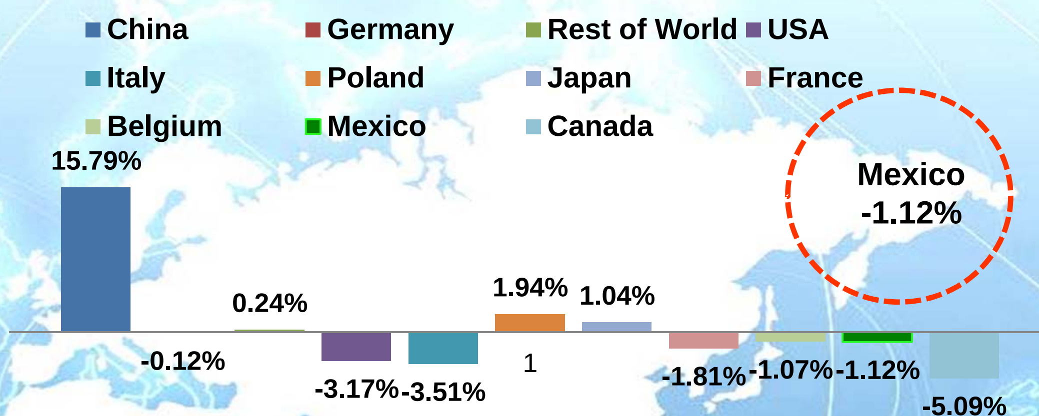
1. World Cluster Status

Building Fixtures, Equipment and Services (Metal Manufacturing)

Export Value by Nation, 2010
Building Fixtures, Equipment and Services (Metal Manufacturing) Cluster



Export Performance by Nation, 2000-2010
Building Fixtures, Equipment and Services (Metal Manufacturing) Cluster

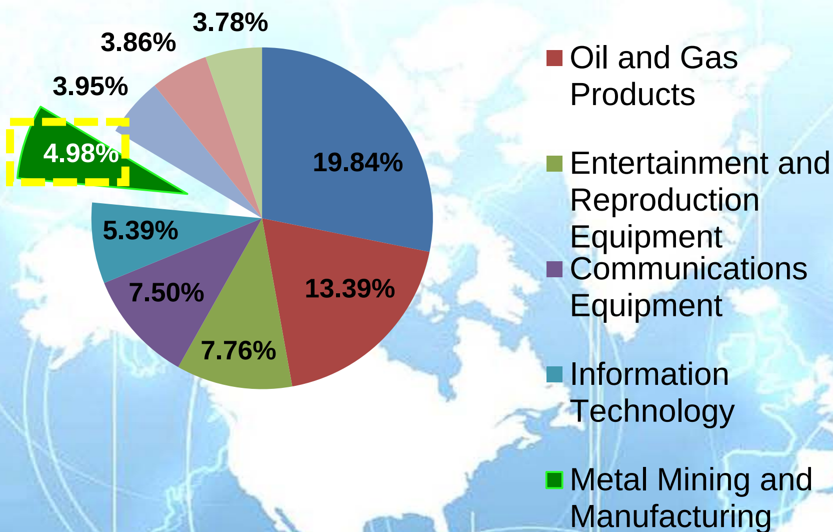


Bilateral Trade Mexico – China
Building Fixtures, Equipment and Services (Metal Manufacturing)
2010
Exports: 12%
Imports: 35.80%
Balance: -36.70%

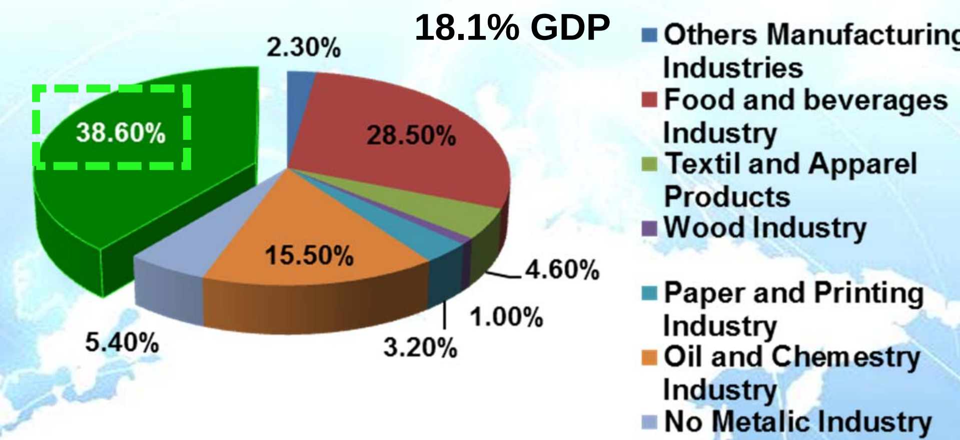
Source: Own creation, based on Harvard and INEGI databases

2. Relevant Cluster Charts

Exports by Cluster, 2010 Mexico



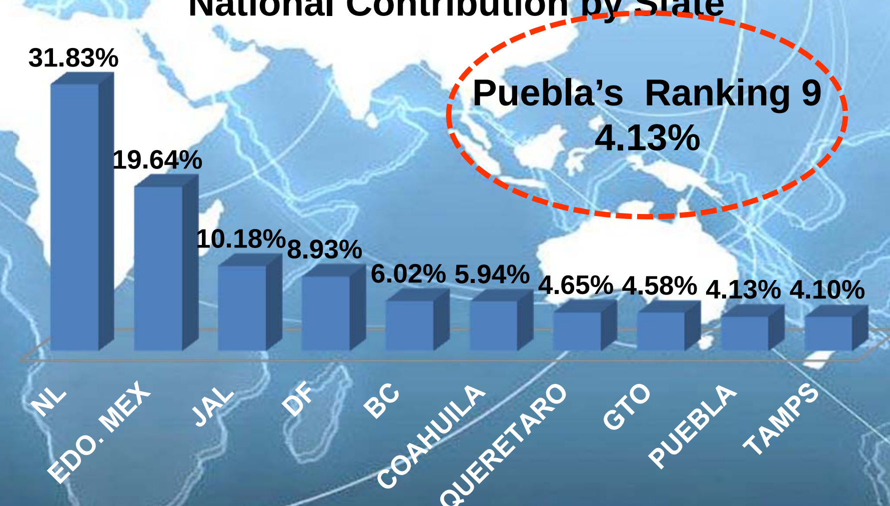
Building Fixtures, Equipment and Services (Metal Manufacturing) Sector Contribution GDP (Mexico)



FDI´s Building Fixtures, Equipment and Services (Metal Manufacturing) in Mexico (M USD)

2009	268
2010	448
2011	497

National Contribution by State



Source: Based on Harvard , Word Trade Atlas and INEGI databases

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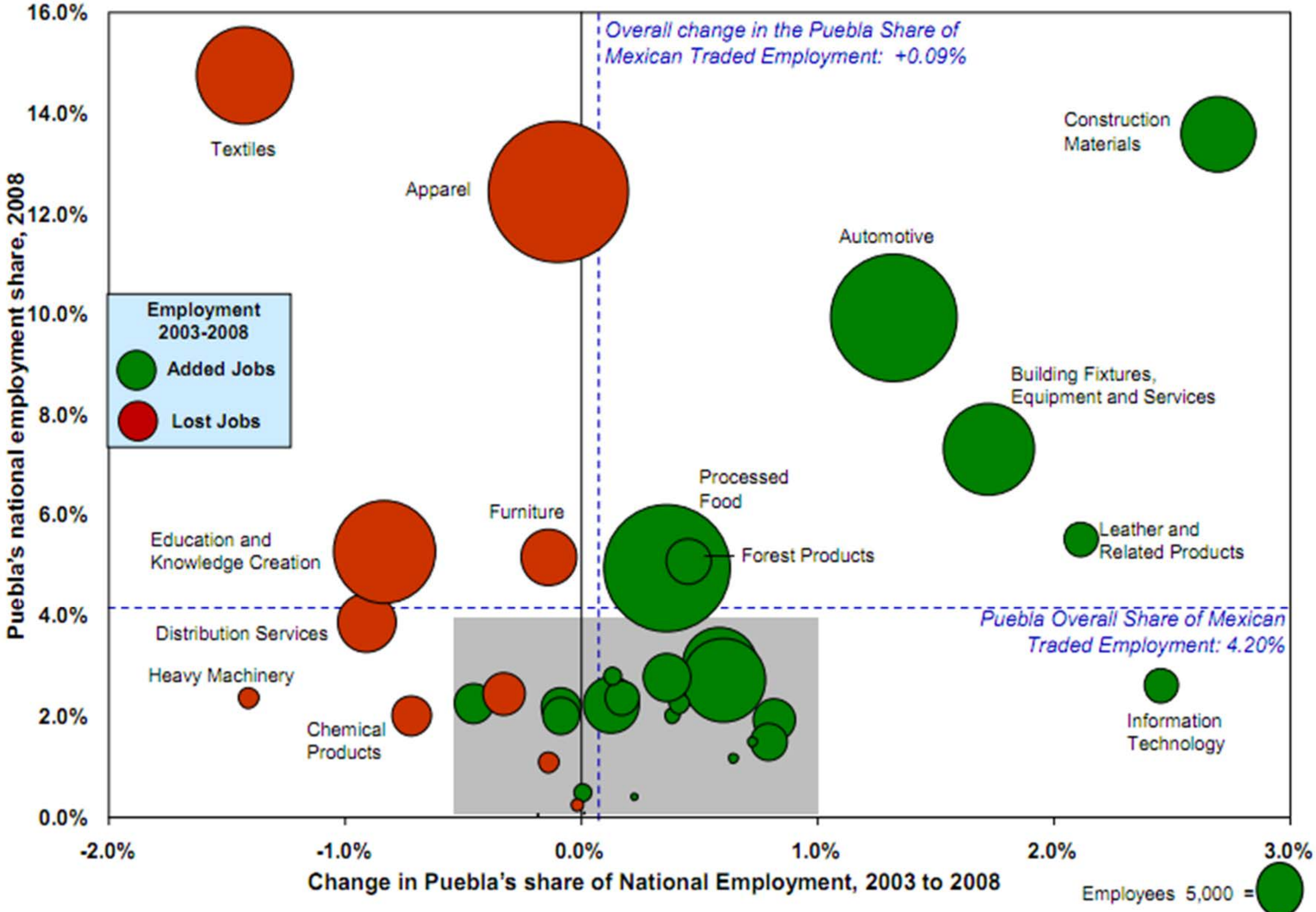
2.1Traded Clúster Composition of the Puebla Economy



Source: Prof. Michael E. Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School; Richard Bryden, Project Director. Contributions by Prof. Niels

3. Cluster Diamond

Chances

Price changes in commodities products.
International Economic Crisis
Natural Disasters

Context for Firms Strategy and Rivalry

+ Proportional relationship between firm size and technology level.
+ 23 industrial parks
+ **International standards ASME, ASTM, API, AISI, AWS.**

~ **MSME´s competitiveness is based on operation efficiency**

− High entry barriers MSME´s

Factor Conditions

+ Basic labor skills .
+ **Experience in the automotive and metalworking**
+ Basic infrastructure.
+ Competitive wages.
+ Free trade agreements

~ Transport infrastructure not suitable for heavy industry.
~ **Low level HR certificate**
~ Atracting Foreign Direct Investment

− **Low investment in R & D**
− Imported technology

Demand Conditions

+ **Demand source for related industries.**
+ Sophisticated demand for specialized industry.
+ Standard products for SME´s

− **Limited design capacity to fulfill demand**
− **Lack of flexibility for OTD.**

Related and Supporting Industries

+ Public and private universities.
+ **Related industries: Plastic, Automotive, Oil, Heavy Machinery, Pharmaceutical, Construction, Aerospace, Food,**
+ IFC: CESAT.

~ IFC´s: Canacintra, CENEC, Concamin, CANACERO. **"Non-value added"** to the industries

− Limited distributors of machinery and raw materials
− **There is not specific institution for this industry**
− **Improve college programs**

Source: own creation

4. Value Chain

Support Activities

Firm Infrastructure	**(-) Minimum financial management**	(-) Conventional & CNC machine tools	(-) Vertical Organizational Structure	**(-) Low investment in certifications**
Human Resource Management	**(-) Empirical knowledge, no career plans**	(-) Basic operator training at floor level	(+) High wages in manufacturing**.**	
Technology Development	**(-) All imported machines and equipment.**	(-) Developing in house technology	(-) Pieces sophisticated, technology is acquired.	(+) Local knowledge transfer **(-) Low investment**
Procurement	(-) Lack of storage	(+) Need to standardize the coding	**(-) Suppliers concentrated only in the cities**	

Margin

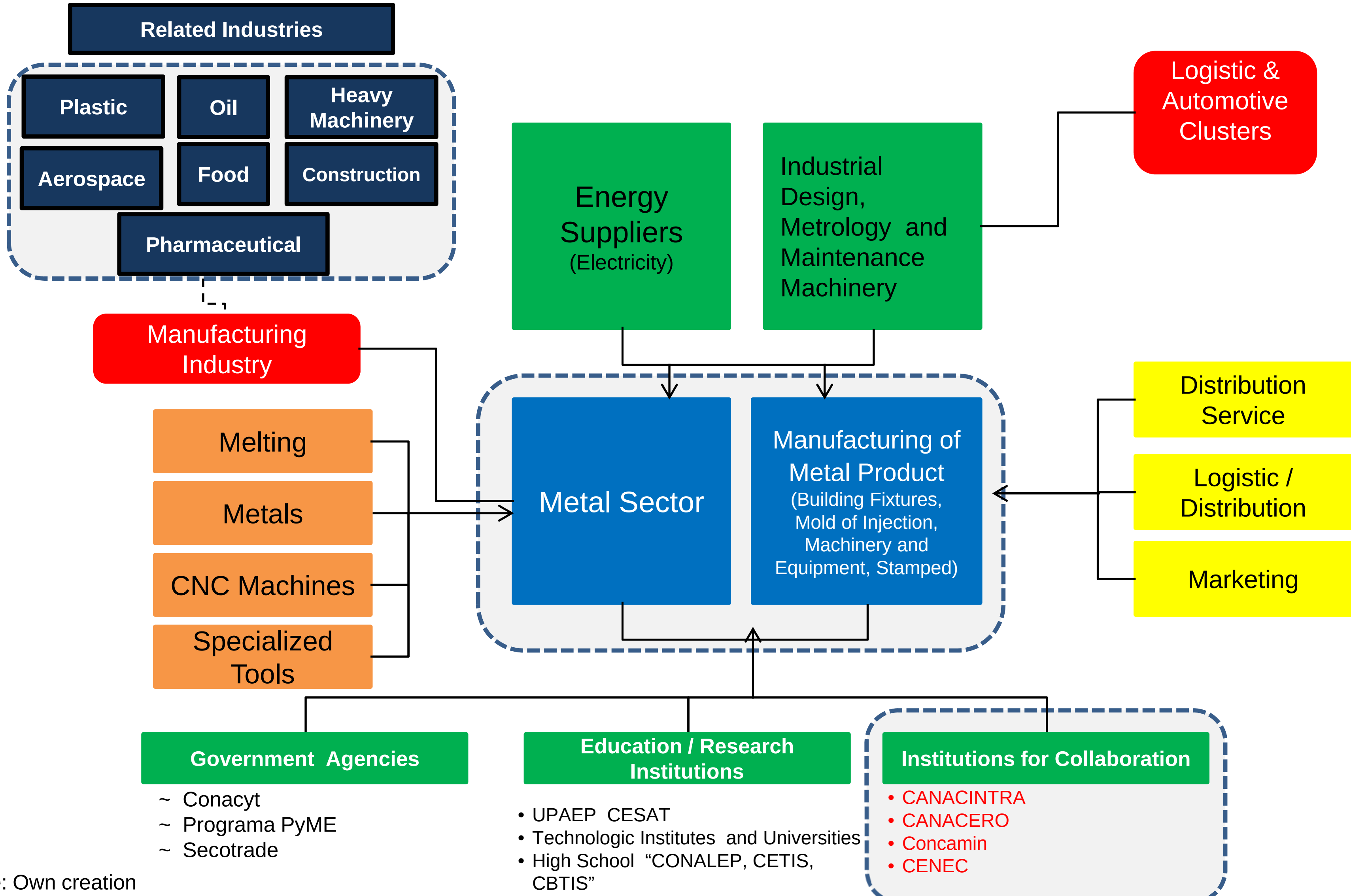
Inbound Logistics	**Operations**	**Outbound Logistics**	**Marketing and Sales**	**After sales service**
(-) Special materials. Make to Order. (-) Planned according to Logistics projects. (+) Standard materials. Make to Stock. (-) Various credit schemes, small inventories	(+) Design provided by customer (manufacturing drawing or software). (-) Own Design: according pieces **(+) Attributes and variables according to standards** (-) **Upgrade manufacturing**	(+) **Incoterms as may be agreed in the contract** (+) Contract logistic national and international	(-) Industrial promotion by satisfied customers **(-) Sales through application engineers.** (-) Trade fairs and conferences	(-) Certificates of quality and warranty (-) Installation (~)Training (-) Repair (~) Adjustments to assembly (-) **Enhance Costumer service**

Margin

Primary Activities

Source: own creation

5.Cluster Map



Source: Own creation

6. Synthesis of Current Situation

- **(+) The transformation activity adds value to the manufacturing industry**
- **(+) The metalworking has the advantage to provide products for different sectors**
- (+) Puebla has the know-how to become a main cluster
- Lack of sophisticated products
- Small Family Business (MSME's) strategically not associated
- Financial barriers to high technologies
- ***(-) Low interaction among Firms, Universities, Government and Lack of Marketing***
- ***(-) There are no specialized IFC´s***
- (-) Specialized Infrastructure Support

Source: Own creation

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7. Strategy: Cluster Value Proposition

- **To create Multi Operational Skills** that allow the ***Development*** and ***Manufacturing of sophisticated mechanical parts***
- ***To align*** *the actual* metal manufacturing industry focusing on “sophisticated **Design and Quality** based on international standards”
- **To develop Close *Relationship*** with related industries:
  Plastic, Automotive, Heavy Machinery, Oil, Food, Construction, Aerospace, Pharmaceutical through sustainable development
- **Social Benefits** involving Universities, IFC´s and Government to pursuit shared value

Puebla is synonymous of high quality and experience in manufacturing metalworking companies for both, domestic and international markets

VISION :

Interaction among *Design + Upgrade Manufacturing + Quality*

Source: Own creation

8. Relevant Project Priorities

Research and Development Metalworking Technological Center (R&D MWTC)

- To Promote Upgrade Design + Manufacturing.
- Collaborate with firms to develop competitive advantage strategies.

High Tech Industrial Park (HTIP)

- Suitable Infrastructure to Advance Manufacturing.

Shared Value Project

Generate specialized knowledge to trigger economic growth, through the interaction of Government Universities, Firms & IFC´s to create projects that enhance the QLL generating employments with value added and competitive wages.

Knowledge → Manufacturing with value added → Economic Growth

Source:
Own creation

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Thank you!