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Effects of Globalization on the North American Anodizing Industry

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Premise

Effects of Globalization on the North American Anodizing Industry

The anodizing market is a very fragmented market, thus difficult to obtain facts and figures regarding the domestic dimension of the market all the more regarding the foreign trade. The analysis bases therefore on fractal information and the conclusions have to be considered approximative guide lines.

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Effects of Globalization on the North American Anodizing Industry

- *The Context of Globalization*
- *Structure of NA Anodizing Business*
- *Business Characteristics and Globalization*
- *Characteristics of Anodizing Business*
- *Latent Threats*
- *How to Respond*

The Context of Globalization

What is happening

Mergers & Acquisitions

Trade Deregulation

Increasing Competition

Price Pressure

Flow of Information

Interlinked Markets

World-wide Strategies

Reduced Growth Rates

Overcapacity

Unemployment

... And how is anodizing therefrom affected?

Structure of NA Anodizing Business

Technology

No quantum leap in technology change expected

- *most common type of anodizing:*
 - Type B, conventional sulfuric-acid*
- *minority:*
 - Type C, hardcoat anodizing*
- *fallen out of favour (except military):*
 - Type A, chromic-acid anodizing*
- *only few:*
 - phosphoric-acid anodizing as pretreatment to adhesive bonding in aerospace application*
- *different types of coloring techniques applied*

Structure of NA Anodizing Business

Dimension of North American anodizing business

- *Aluminum production in North America*
 - *30-50% mill-finish*
 - *30-35% painted (liquid or powder)*
 - *20-30% is anodized (estimation)*
 - *No further figures obtainable*

- *imports from coil anodized material from Europe (mainly)*
- *no figures available how much anodized semis is imported*

Structure of NA Anodizing Business

For comparison the German Market (piece part)

Building remains the main application of anodizing
Anodizing is still a steadily growing market
... But prices are under pressure

■ *German market (source VOA):*

	<u>coated</u>	<u>anodized (mio sqm)</u>
2001	83.6	51.5
2002	83.5	52.3
2003	83.0	53.7

■ *from the 53.7 mio sqm anodized in 2003:*

- *41% were destined to the building market*
- *21% were colored*

Structure of NA Anodizing Business

For comparison the European Market (piece part)

**Overcapacity more pronounced in coating than in anodizing
20-30% of anodized material is estimated to be colored**

■ *European market (source Estal):*

	<u><i>coated</i></u>	<u><i>anodized (mio sqm)</i></u>
<i>1999</i>	<i>360</i>	<i>200</i>
<i>2003</i>	<i>420</i>	<i>290</i>

■ *From the estimated 400 anodizing facilities are 290 members of Estal*

Structure of NA Anodizing Business

Structure of North American anodizing industry

Very fragmented (more than 1000 facilities estimated in NA)

- *many captive: shop of a larger fabrication unit destined for internal use only*
- *difficult to perform a market survey*
- *composition of Anodizers Council members:*
 - *56% large (>100 employees)*
 - *30% medium (26-100 employees)*
 - *14% small (<26 employees)*
- *but composition of Anodizers Council members not representative of anodizers population*
- *rather small-medium sized reality*

Structure of NA Anodizing Business

NA anodizing groups

- *9 extruder groups operating 21 anodizing facilities in NA (with ≥ 1 line)*
 - *mainly building/architecture application oriented*

- *5 anodizer groups operating approximative 14 anodizing facilities in NA but not more than 3 facilities in each group (with ≥ 1 line)*

Structure of NA Anodizing Business

Continuous coil anodizing

- *only 5 companies operate 16 continuous coil anodizing lines*
 - *1 company operates 8 lines*
 - *1 company operates 4 lines*
 - *1 company operates 2 lines*
 - *2 companies operate each 1 line*

- *no North American rolling mill has anodizing lines*

- *i.e. coil anodizing is performed by independents*

Structure of NA Anodizing Business

Market segmentation: main pattern

COMPANY TYPE Application Non Integrated Semis Integrated	X	X	X	forward (e.g.parts)
	tolling or resale	tolling	tolling	tolling
	X	forward (e.g.lihtho)	forward (e.g.frames)	X
	Coil	Sheet	Extrusion	Piece
	APPLICATION			

Structure of NA Anodizing Business

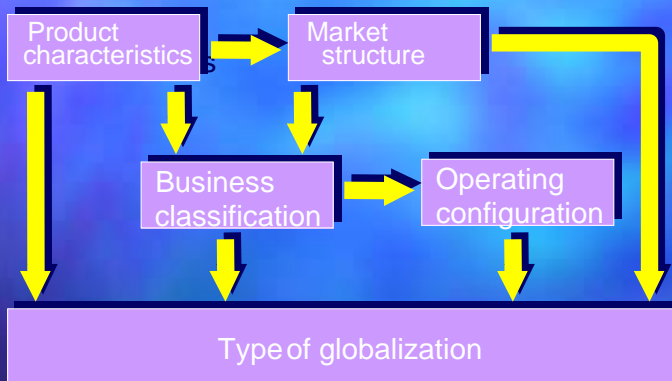
Market segmentation and market behaviour

COMPANY TYPE Application Non Integrated Integrated Semis Integrated	X	X	X	forward (e.g.parts)
	tolling or resale	tolling	tolling	tolling
	X	forward (e.g.lihtho)	forward (e.g.frames)	X
	Coil	Sheet	Extrusion	Piece
	APPLICATION			

- Which is the characteristic of this business
- How big is this addressable market?
- Which is the growth rate?
- Is this market segment threatend?
- Is globalization a threat?

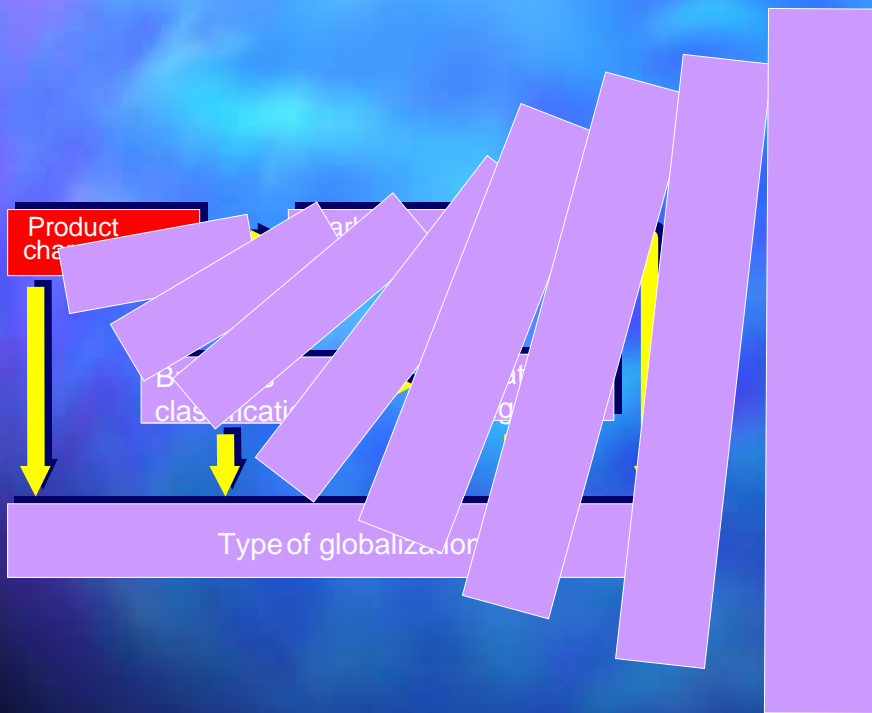
Business Characteristics and Globalization

Basic classification of business types



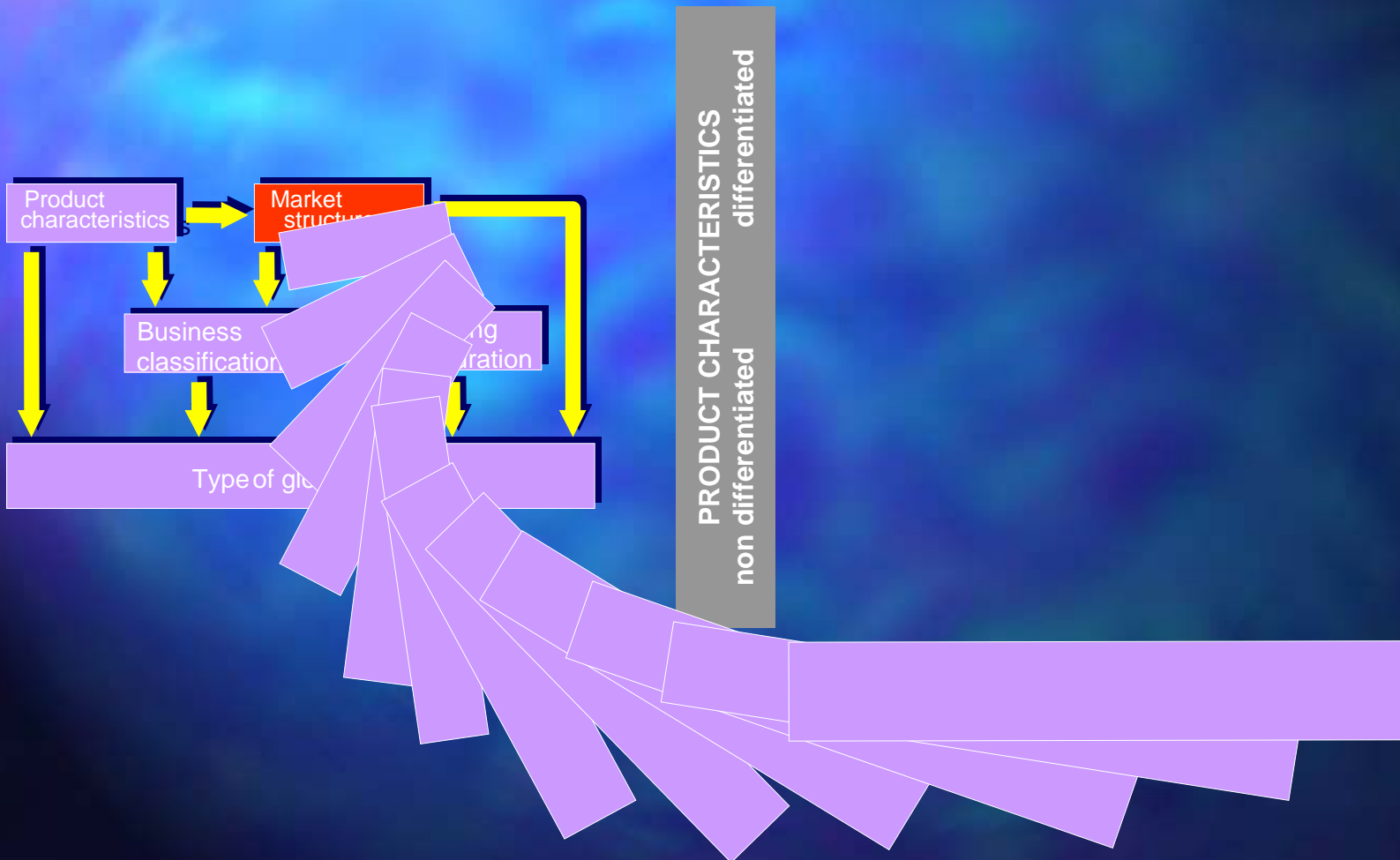
Business Characteristics and Globalization

Basic classification of business types



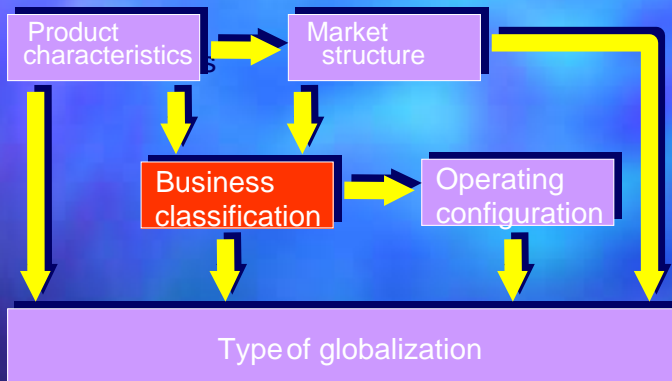
Business Characteristics and Globalization





Basic classification of business types



Business Characteristics and Globalization

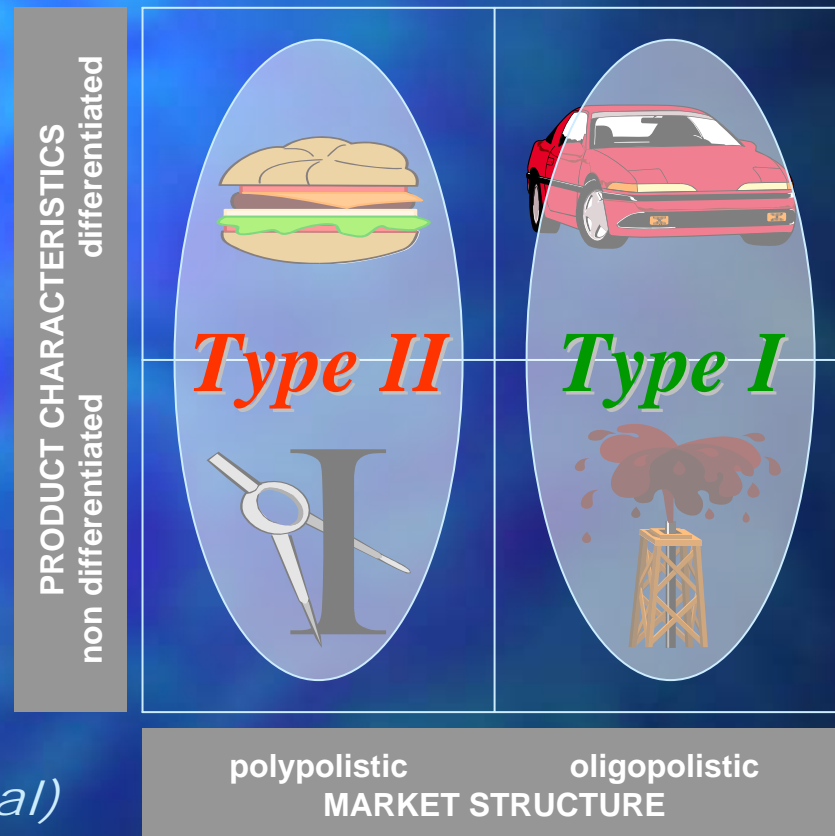
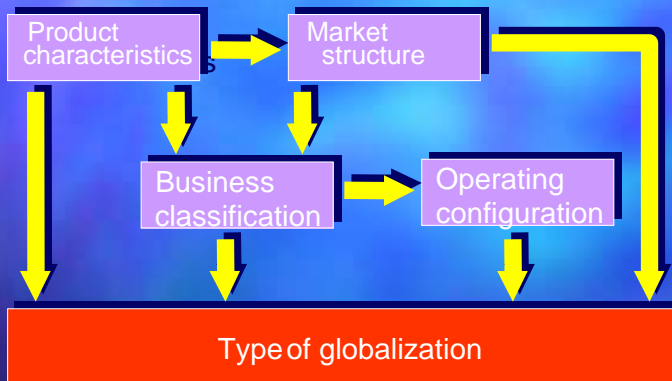
Basic classification of business types



PRODUCT CHARACTERISTICS differentiated non differentiated	 Convenience	 Speciality
	 Standards	 Commodity
polypolistic		oligopolistic
MARKET STRUCTURE		

Business Characteristics and Globalization

2 main globalization types

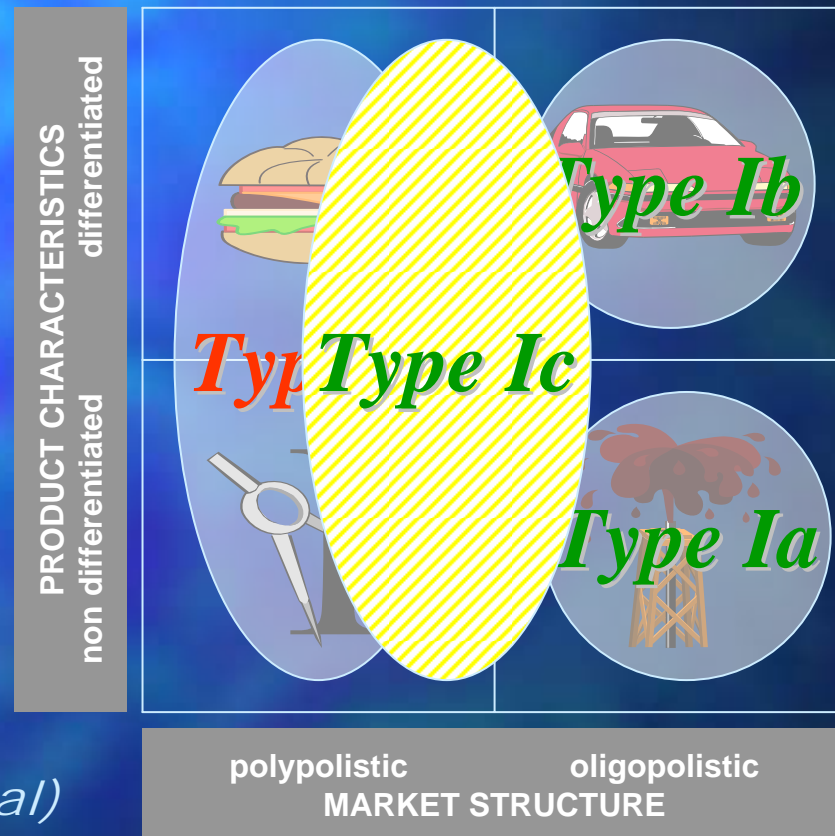
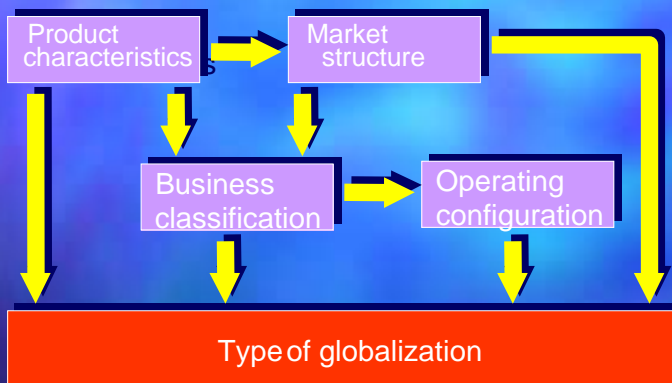


Type 1: material G. (physical)

Type 2: immaterial G. (financial)

Business Characteristics and Globalization

2 main globalization types

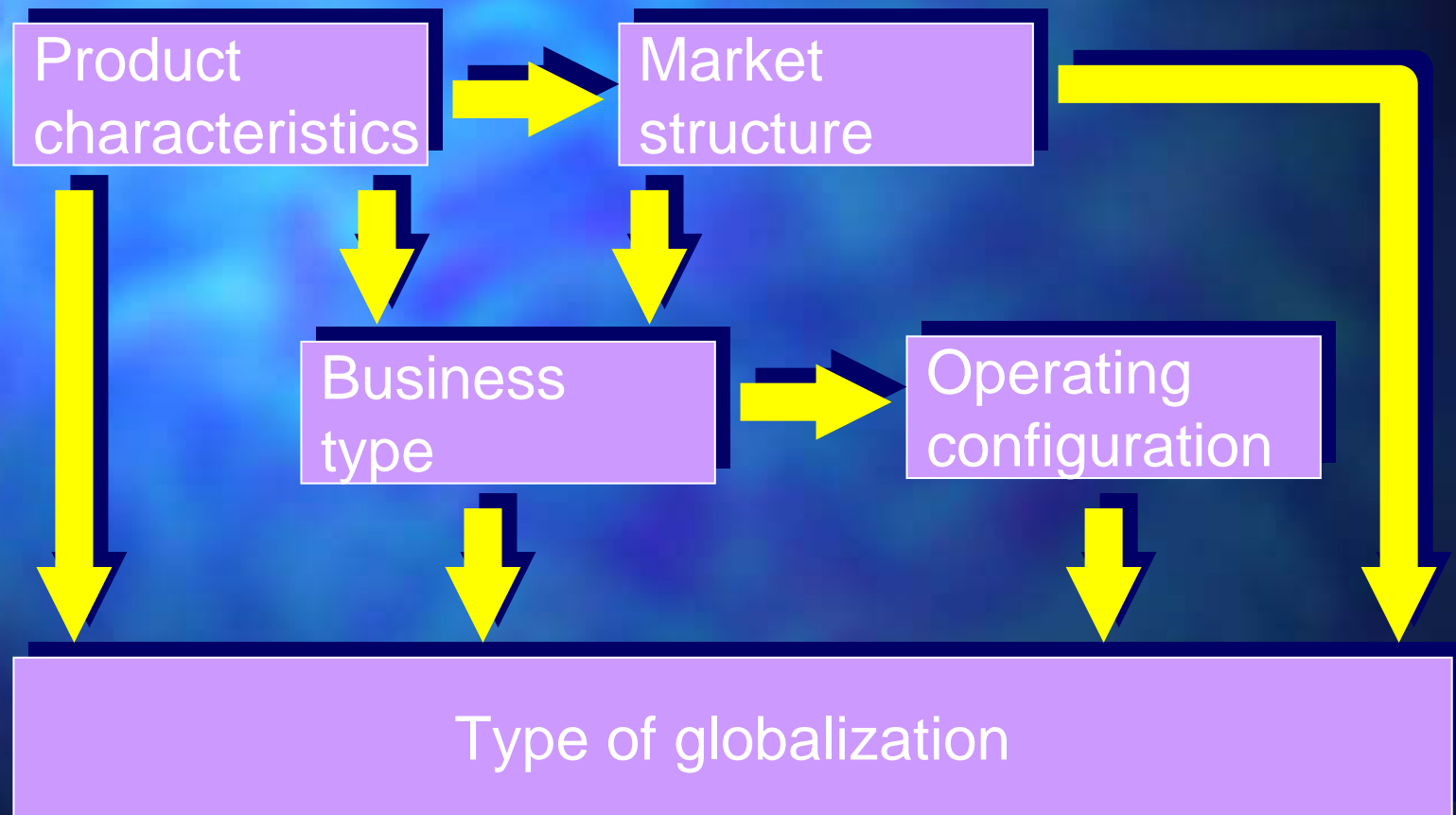


Type 1: material G. (physical)

Type 2: immaterial G. (financial)

Characteristics of Anodizing Business

Framework and determinants



Characteristics of Anodizing Business

Product characteristics: summary

For the anodizing process:

- **not a product but a specialized operation, therefore...**
- **...virtually sold is the capacity, low proactive action scope**
- **low differentiation degree, ...and reproducible know-how**
- **the transaction object is a service, i.e. the delivery time and matching of quality are mandatory performance**

For the treated product:

- **except for piece anodizing the anodizing operation is mainly performed immediately after the semis operation, therefore an integration in semis is reasonable for certain applications**

Characteristics of Anodizing Business

Market structure: summary

Implications from product:

- **only piece part cannot be imported and has to be anodized regionally or in-house, this represents a natural barrier against Type1c Globalization**

For remaining anodizing:

- **limited geographic scope of action favors...**
- **...fragmented (polypolistic) competition structure (except coil anodizers)**
- **relative low entry barriers and acquainted technology favors...**
- **...proliferation of family owned SME**

Characteristics of Anodizing Business

Operating configuration: summary

Implications from product:

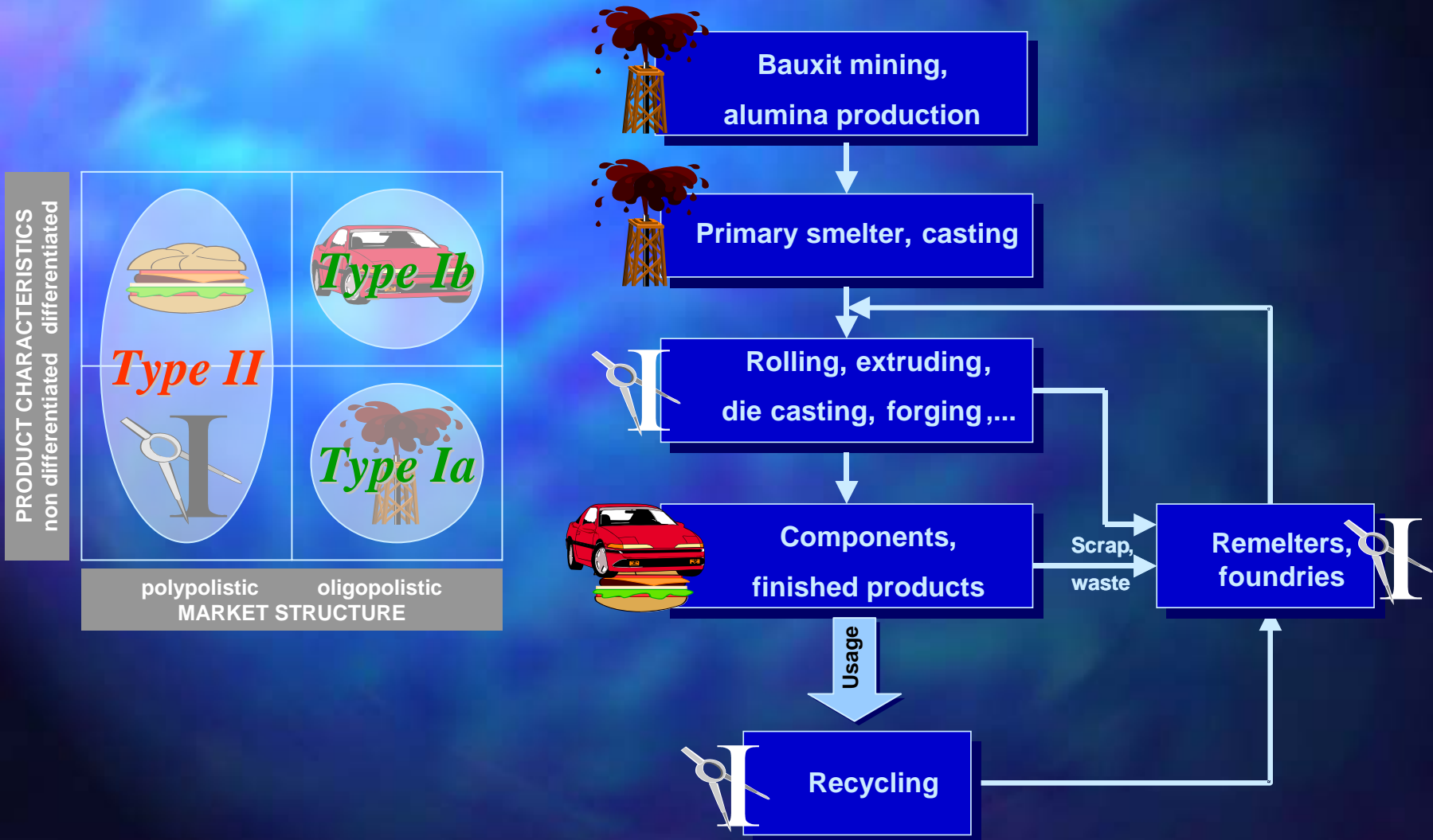
- **operating configuration determined by product-value/transport-cost ratio**

For anodizers:

- **usually family owned single plant operation**
- **often in-house fabrication shop advantageous**
- **possible multiplant configuration with strategy of adding geographical market share - typical for a fragmented business...**
- **...this opens possibility of Type 2 Globalization strategy (but only implemented regionally by 5 NA groups)**

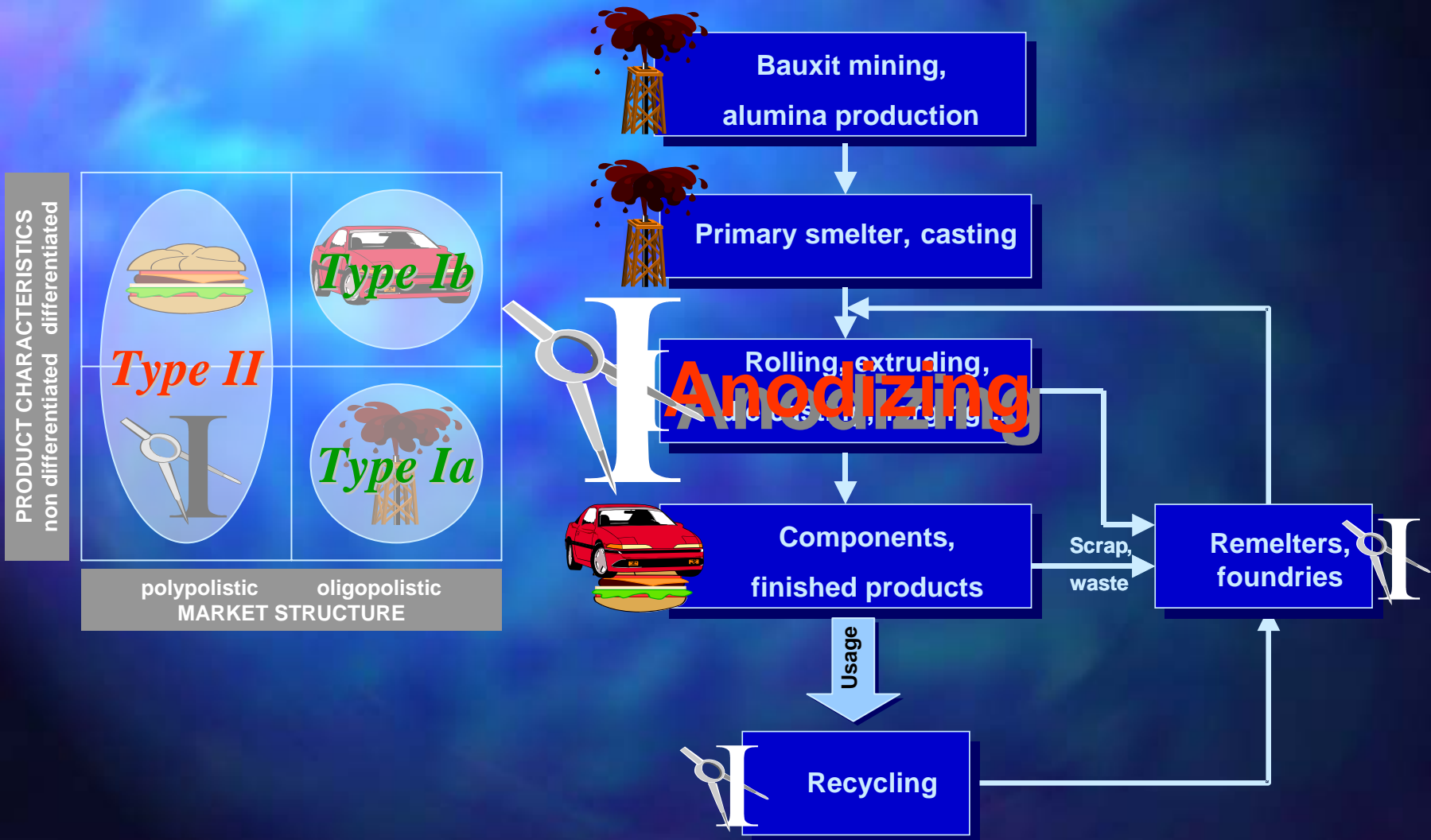
Characteristics of Anodizing Business

Aluminium industry structure and globalization type



Characteristics of Anodizing Business

Aluminium industry structure and globalization type



Characteristics of Anodizing Business

Globalization type of anodizing business

- *anodizing business is not really a globalized neither a globalizing business*
- *if ever, it would follow a Type 2 Globalization model, i.e. immaterial (financial) globalization*
- *presently imported material follows type 1c Globalization pattern, i.e. low cost criteria associated with semis imports*
- *exception is anodized rolled material (especially specialized coil anodized material)*
- *the „globalization“ issue for anodizers is for the main part rather limited to continents*
- *5 equal large North American anodizer groups are following a market adding Type 2 strategy with at present up to 3 facilities each*
- *but even more pronounced than in extrusions, the reality of anodizing is a family owned SME operation business*

Characteristics of Anodizing Business

Globalization type of anodizing business

Therefore:

- *from the product characteristics the anodizing business is not a globalized business (with some exception of coil anodized)*
- *the anodizing is imported/exported with the basic products (rolled sheet or extruded sections)*

That means:

- *anodizing belongs to Type 1c (physical) or Type 2 (financial) globalization*
- *the piece anodizing is NOT a globalized business (because related only to the operation, which is not globalized)*

Characteristics of Anodizing Business

NA market volume of anodizing

No detailed and consolidated informations available

- *How big is the North American market for anodizing?*
- *How much is captive (semis or application integrated)?*
- *How much is accessible to the non-integrated (the bulk of anodizers)?*
- *Which segments are growing?*
- *What are the implications for the equipment specifications?*

Latent Threats

Intrinsically originated

- *lacquering (liquid or powder) remains an issue*
- *environmental issues even if acid solution treatment is not any more a problem*
- *for independents: insourcing to customer units, indeed...*
- *... 'make or buy' decision depends on existing overcapacity, quality and logistic aspects*

Latent Threats

Extrinsically originated

- *service of anodizing will not be imported, but...*
- *...will be imported in conjunction with profiles or sheet*
- *quantity may remain negligible, but...*
- *...will have an influence on the domestic price level*
- *potential danger of increased imports of non colored anodized material, in order to...*
- *...perform local coloring according to market needs (reduced stocks)*

How to Respond

Which is the winning strategy

For the application integrated anodizers (mainly piece part anodizing):

- *Major threat*

- *no major threat from competitive constellation*

- *Rational*

- *„make or buy“ evaluation remains*
- *in-house processing depending from quality control, speed of supply, cost of additional handling*

How to Respond

Which is the winning strategy

For the semis integrated anodizers (mainly batch operation, fixed length extrusions or piece part):

■ *Major threat*

- *imports of anodized semis according to Type 1c Globalization increasing fast (additional low cost effect of anodizing); just anodizing operation is hardly subject of globalization issue due to logistic cost*
- *coating remains an issue*

■ *Rational*

- *integrated service of anodizing for architectural application is mandatory, especially with modern in-line equipment*
- *offer additional value added service as machining*
- *logistic speed remains a trump*

How to Respond

Which is the winning strategy

For the non integrated, job-anodizers operating in NA, distinction is necessary in:

- *a) continuous coil*

- *b) batch sheet, extruded semis, piece part*

this distinction seems to be necessary due to the difference of:

- *investment amount*
- *market structure*
- *business scope*

How to Respond

Which is the winning strategy

For the non integrated, free anodizers operating in NA

a) continuous coil anodizing

■ *Major threat*

- *latent possibility of direct imports of anodized material from potentially semis integrated lines in Far East (Type 1c), quality remains a big issue*
- *coating as alternative product remains an issue*

■ *Rational*

■ *For resale:*

- *sourcing of low price semis and natural anodizing as substrate for dyesub coloring (stock reduction)*
- *push special anodizing (high bright)*

■ *For tolling:*

- *close customer co-operation, consignment stock*

How to Respond

Which is the winning strategy

For the non integrated, job-anodizers operating in NA

b) batch piece part anodizing

■ *Major threat*

- *insourcing of anodizing operation*
- *increasing imports of already anodized semis*
- *again coating as substitute*

■ *Rational*

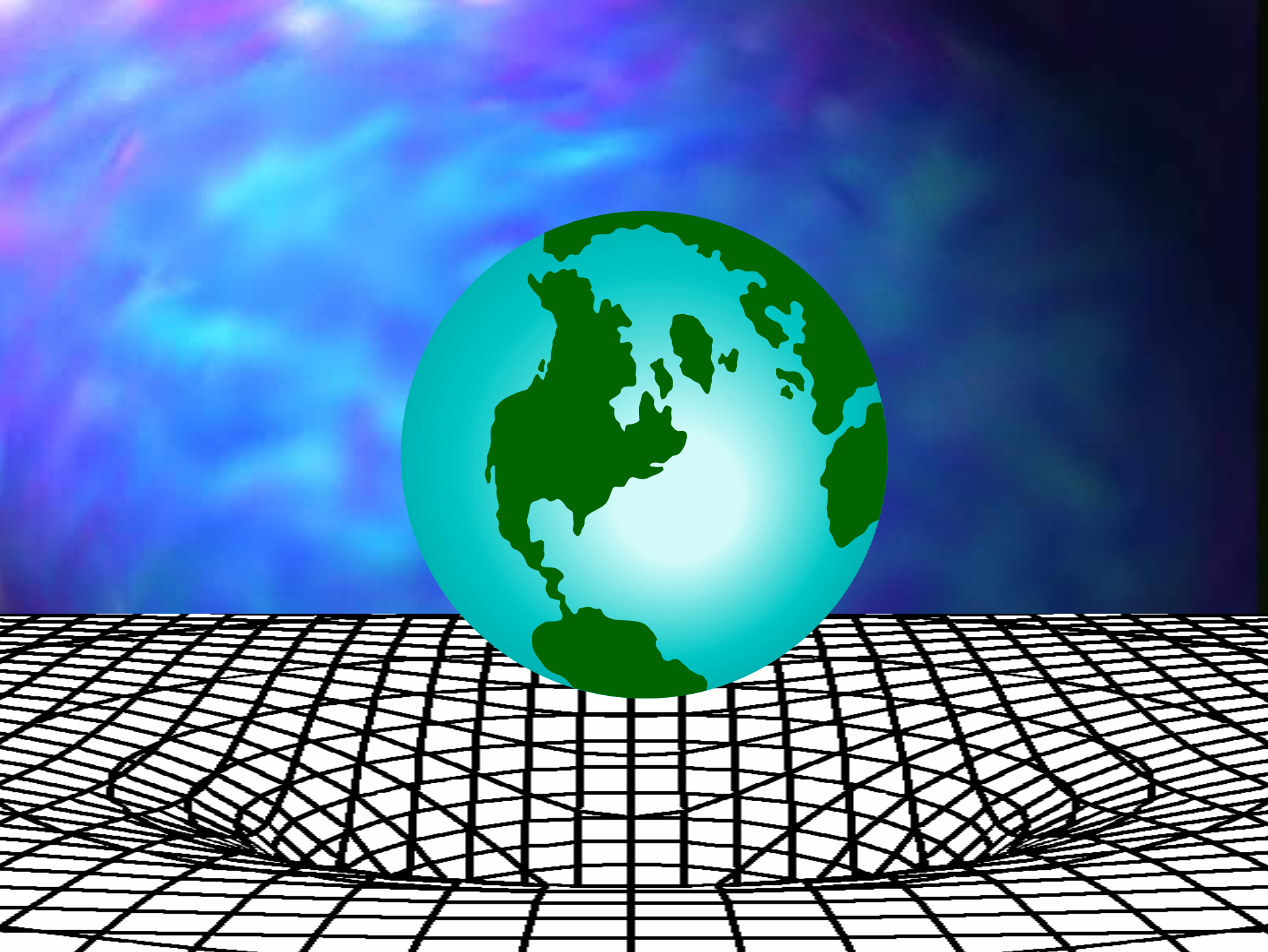
- *create customer binding by preferred co-operation*
- *offer most modern technology*
- *productivity, speed, service*

Summary

Effects of globalization on the NA anodizing industry

- *Even if it makes more sense to import anodized aluminum than non treated semis from low cost countries, globalization is not a real threat for the anodizing industry due to the characteristic of the business*
- *neither it will change the fragmented structure of the NA anodizing industry, but...*
- *...price level may experience a further shift fuelling 'make or buy' evaluations.*

- *Considering the fact that anodizing is primarily a service, ...*
- *...job-anodizers have to develop innovative customer focussed business models.*
- *Who ever will conceive the 'Value Maximizing' model for the customer (and they exist) has not to fear globalizing or non globalizing competition.*



A

immagination materialized

