

ABEX
AUSTRIAN BIOFUEL EXCHANGE



EBES AG
European Bio Energy Services

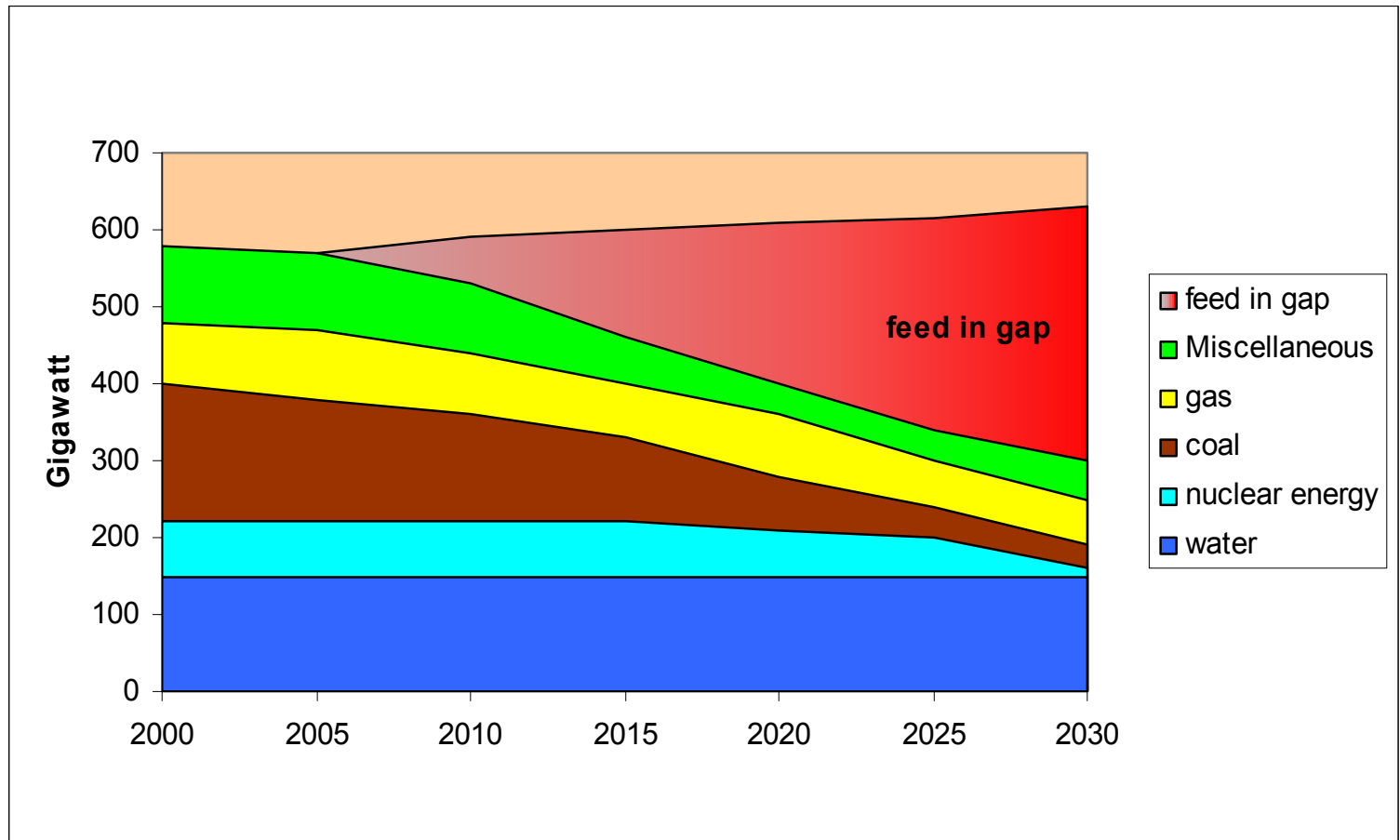
SECURING FUEL SUPPLY A PRECONDITION TO PROJECT FINANCE

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Substitution of Power plants and resulting future capacity in Europe



Source: Cooretec, 2004

RESULTING FACTS Biomass

- Numerous new installations in development
- Number of „bio“ power plants quickly increasing
- Typical 20MW_{e1} installation
- Co-firing in very large scale coal power plants

- Doubling of demand for biogenic fuels
- Shift in demand structure for biogenic fuels
- Volumes demanded at single locations increase
- Security of supply and risk hedging possibilities requested
- Dis-satisfaction with currently available structures

What is making Biomass different ?

Solar

Wind

Hydro

Tidal

Geothermal

**Primary Energy availability is
Independent from operator**

Biomass

**Primary Energy availability
needs management of operator**

BIOMASS Projects impose a long term responsibility on the operator to secure the availability of fuel at any time

Security of supply for the fuel is the basis for financing of any biomass project

Challenges to fuel management

How much of which Quality is needed

How to bundle supply sources

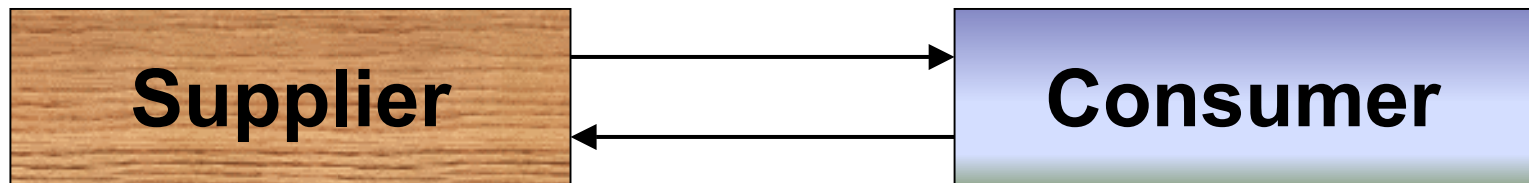
Local versus interregional supply

Long term / short term / spot acquisitions

Hedging against price increases

What if suppliers default

Biogenic energy market today



- no transparency
- difficult getting of information
- lacking quality
- little confidence
- problems for boiler producers
- no products, scarcely brand marks
- etc.
- nevertheless: marketvolume ca. 450MEuro

Current situation for large scale bio-fuel buyers



- ▶ Limited no. of known large scale sellers
- ▶ PPP dominates market
- ▶ Demand rapidly increasing
- ▶ Regional price volatility
- ▶ Limited internat. Trade expertise available
- ▶ Different levels of market development
- ▶ Different (understanding of) quality standards
- ▶ Long term (bankable) contracts rarely available

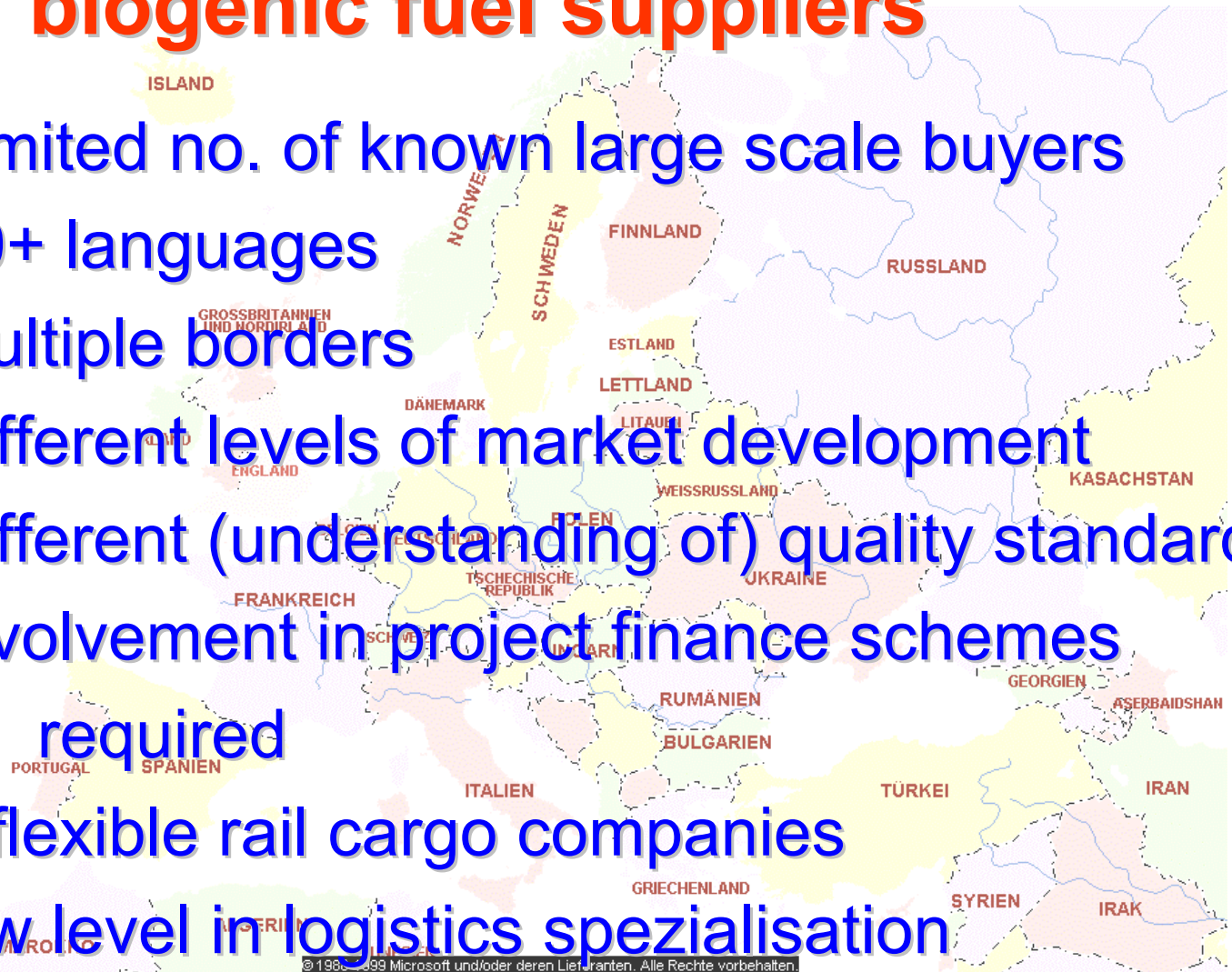


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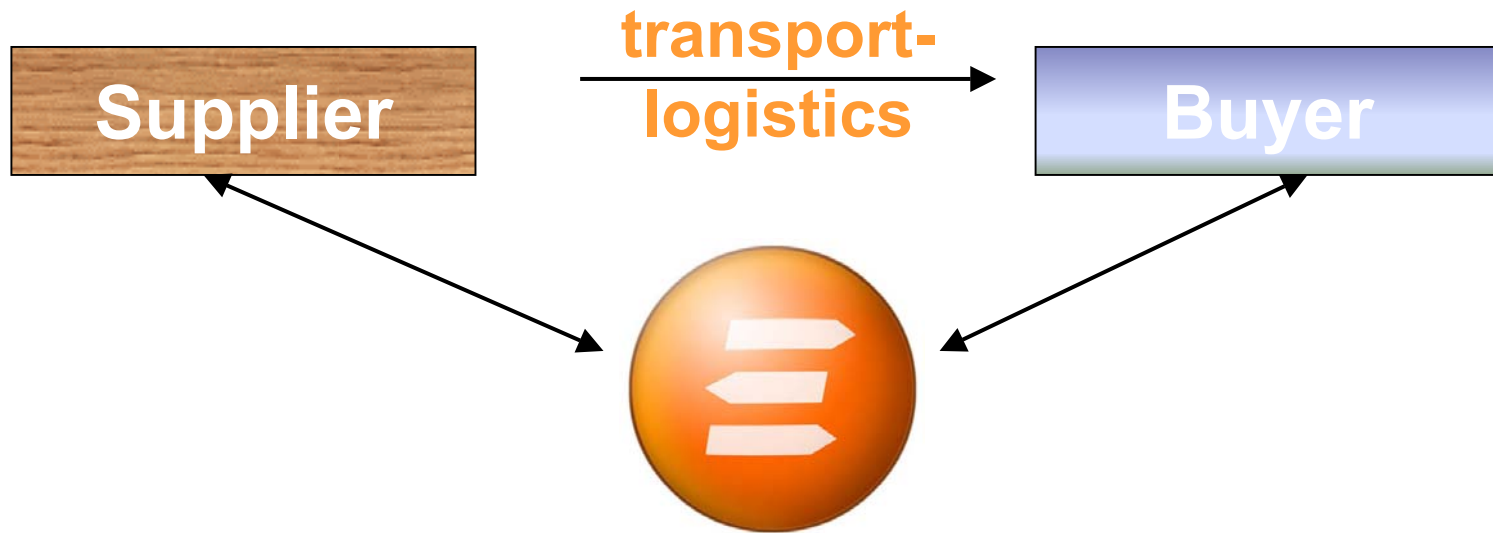
Current situation for large scale biogenic fuel suppliers



- ▶ Limited no. of known large scale buyers
- ▶ 20+ languages
- ▶ Multiple borders
- ▶ Different levels of market development
- ▶ Different (understanding of) quality standards
- ▶ Involvement in project finance schemes required
- ▶ Inflexible rail cargo companies
- ▶ low level in logistics specialisation

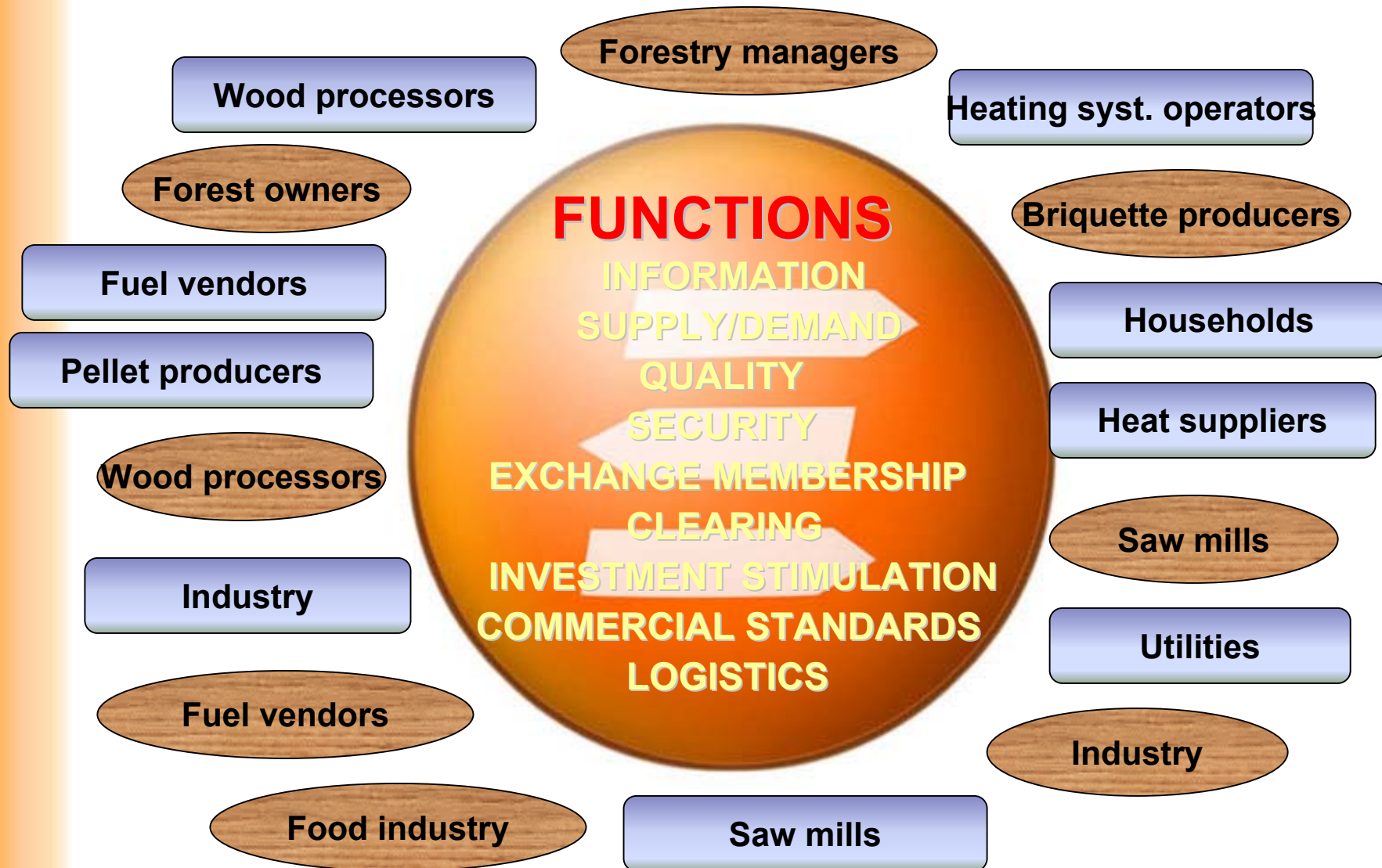


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- access to a much bigger market
- easy and simple accessible
- clearly defined goods
- complete supply chain service offered
- optimised logistics
- long term contracts on demand
- risk hedging tools available

Market exchange as open platform



Forward Business

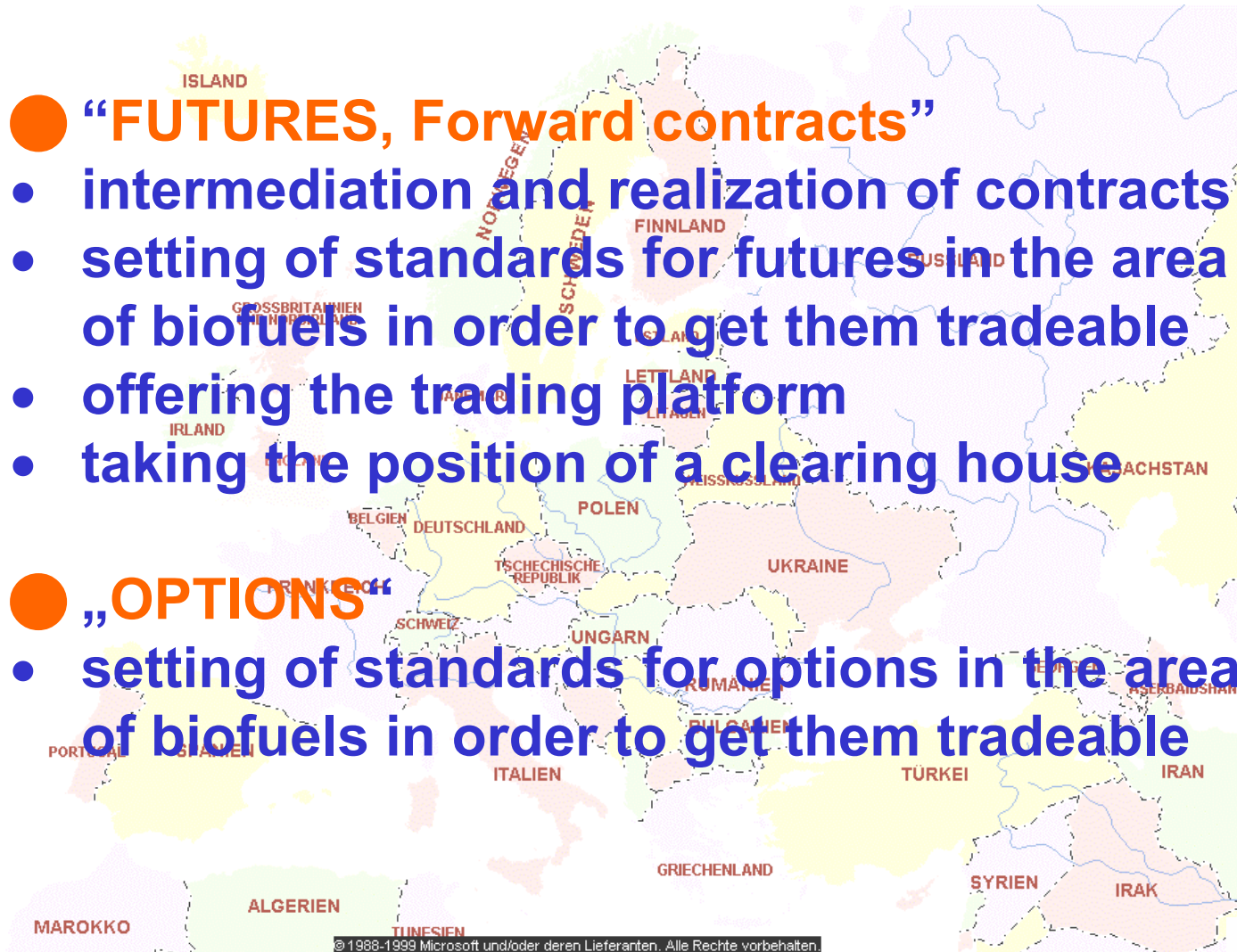


● “FUTURES, Forward contracts”

- intermediation and realization of contracts
- setting of standards for futures in the area of biofuels in order to get them tradeable
- offering the trading platform
- taking the position of a clearing house

● „OPTIONS“

- setting of standards for options in the area of biofuels in order to get them tradeable



FUTURES TRADING

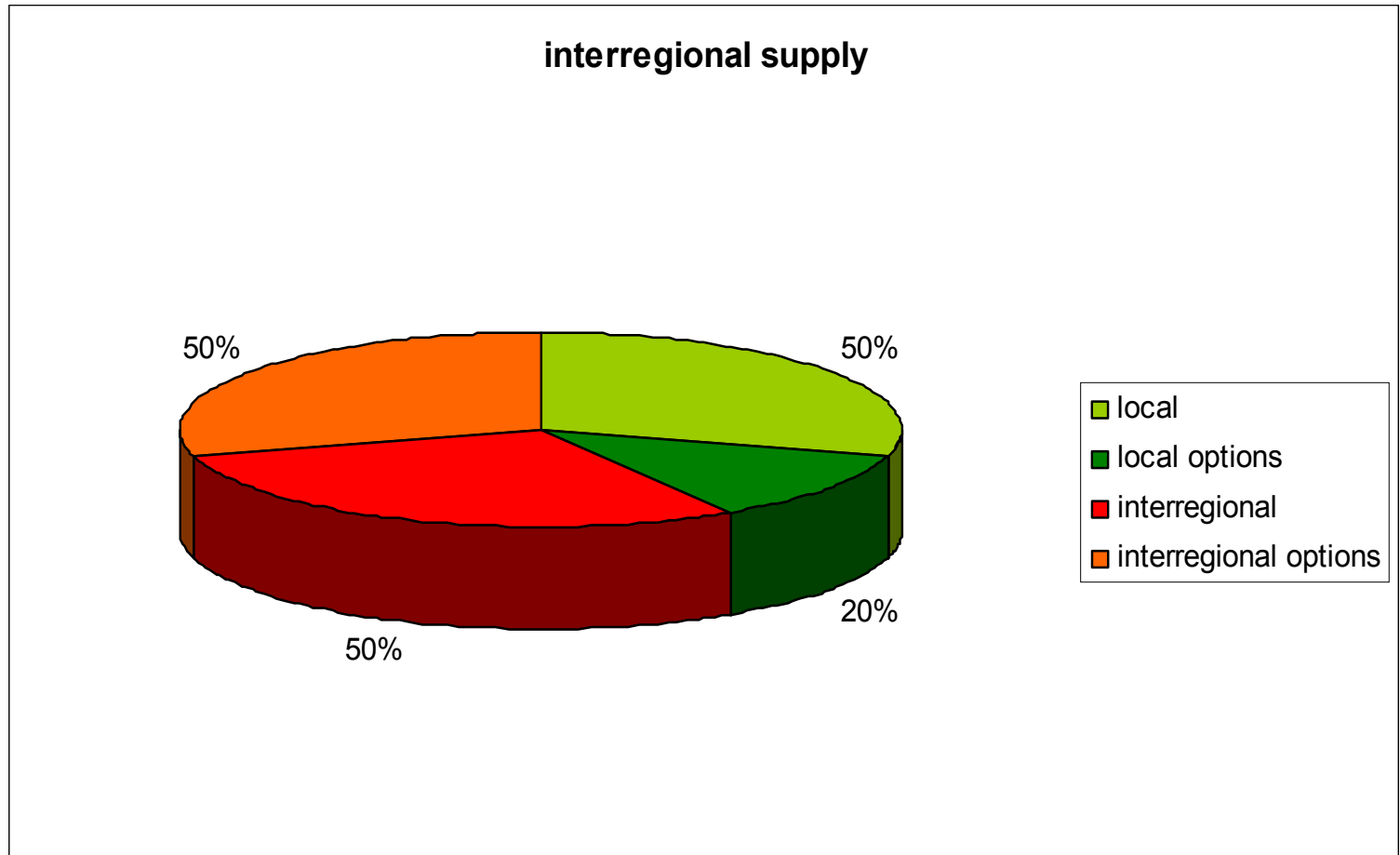


SECURITY STOCKS – an insurance service of EBES

- EBES is building physical stocks
- EBES is holding options and forward contracts on biogenic material
- Power plant operator is buying an option at fixed or variable terms
- Option fees payable at annual basis
- Delivery after utilization of option within 6 weeks
- Accounting unit MWh
- Options fully transferable
- Increased security for continuous operation
- Increased independence

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Procurement portfolio proposal



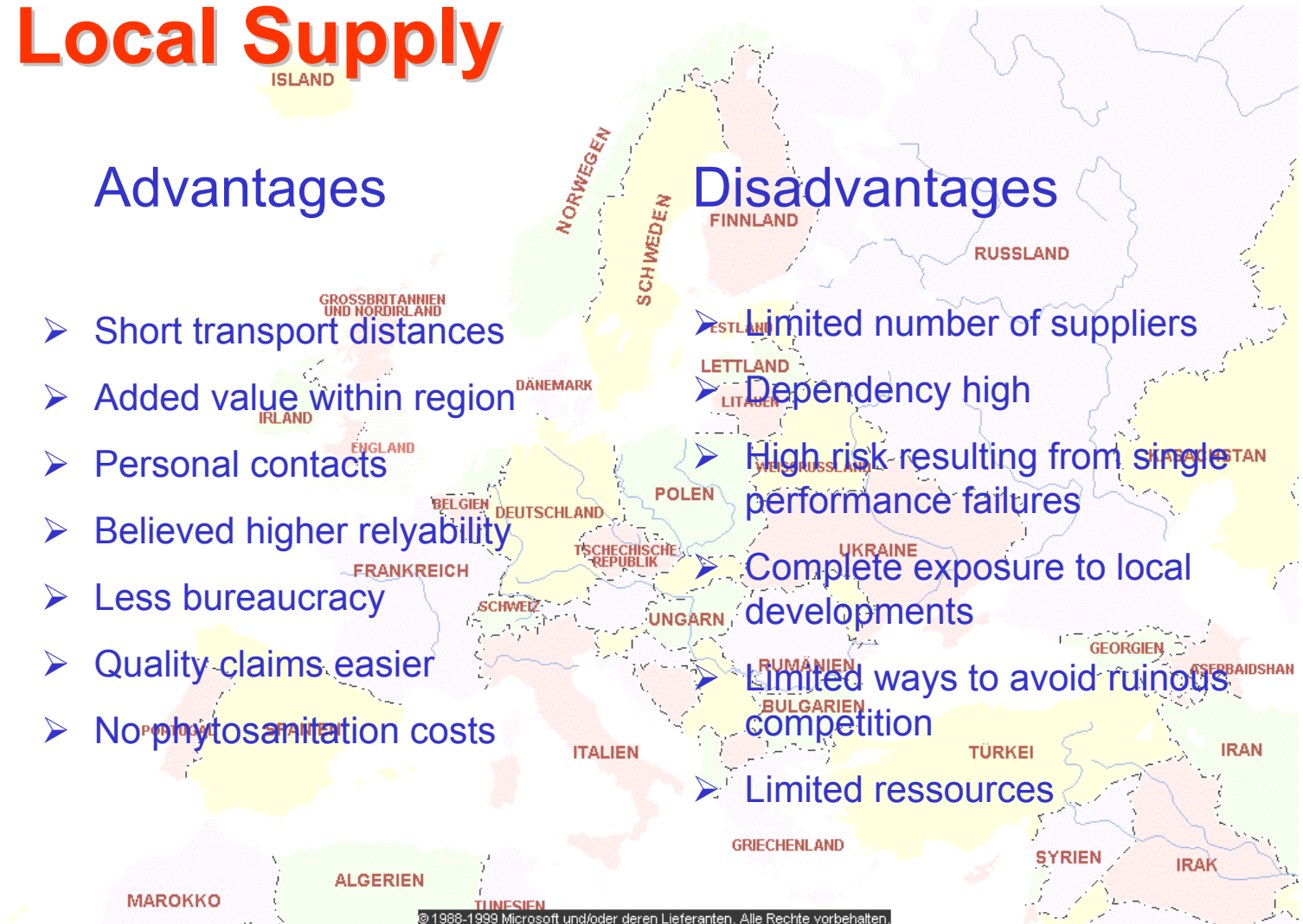
Local Supply

Advantages

- Short transport distances
- Added value within region
- Personal contacts
- Believed higher reliability
- Less bureaucracy
- Quality claims easier
- No phytosanitation costs

Disadvantages

- Limited number of suppliers
- Dependency high
- High risk resulting from single performance failures
- Complete exposure to local developments
- Limited ways to avoid ruinous competition
- Limited resources



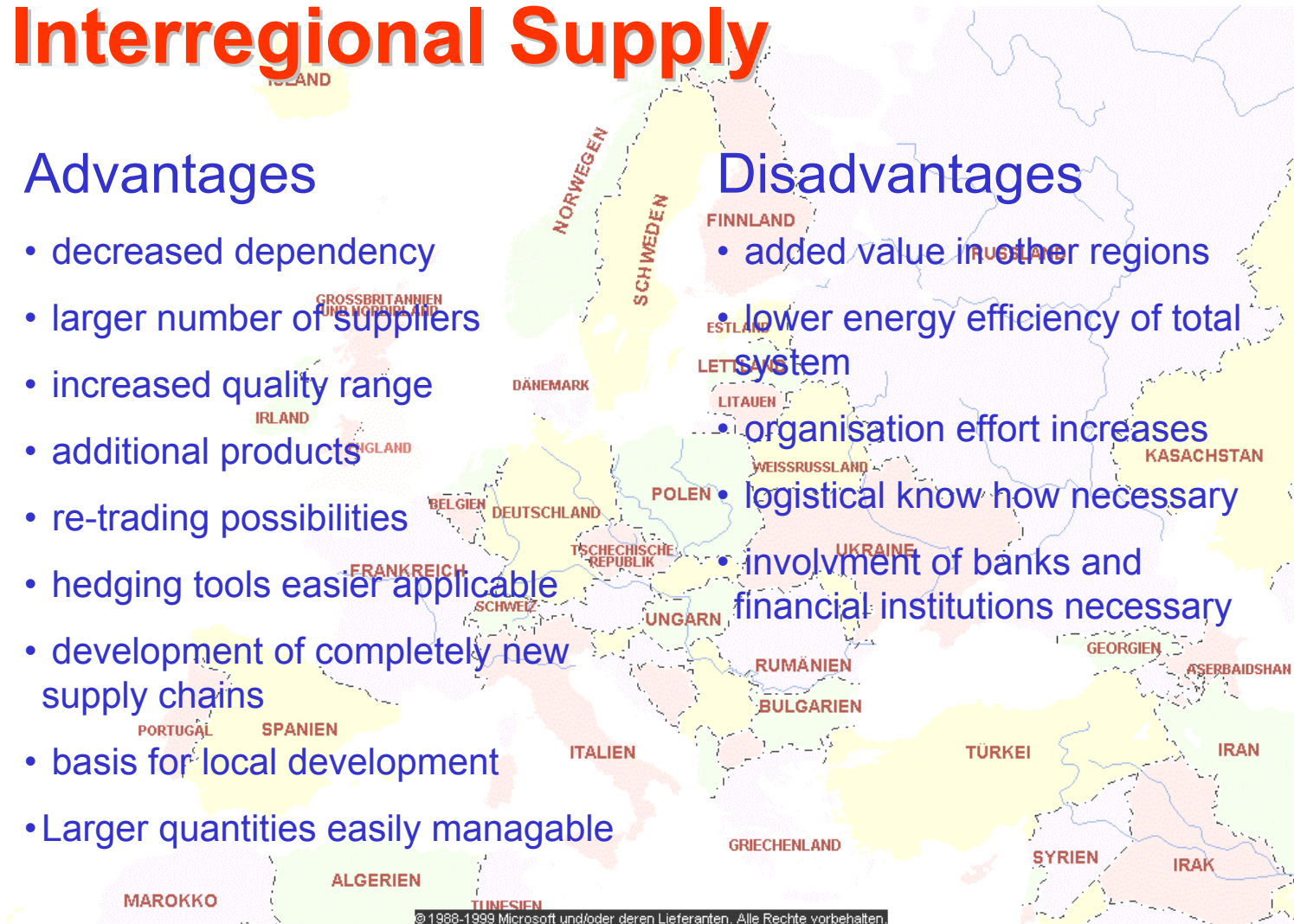
Interregional Supply

Advantages

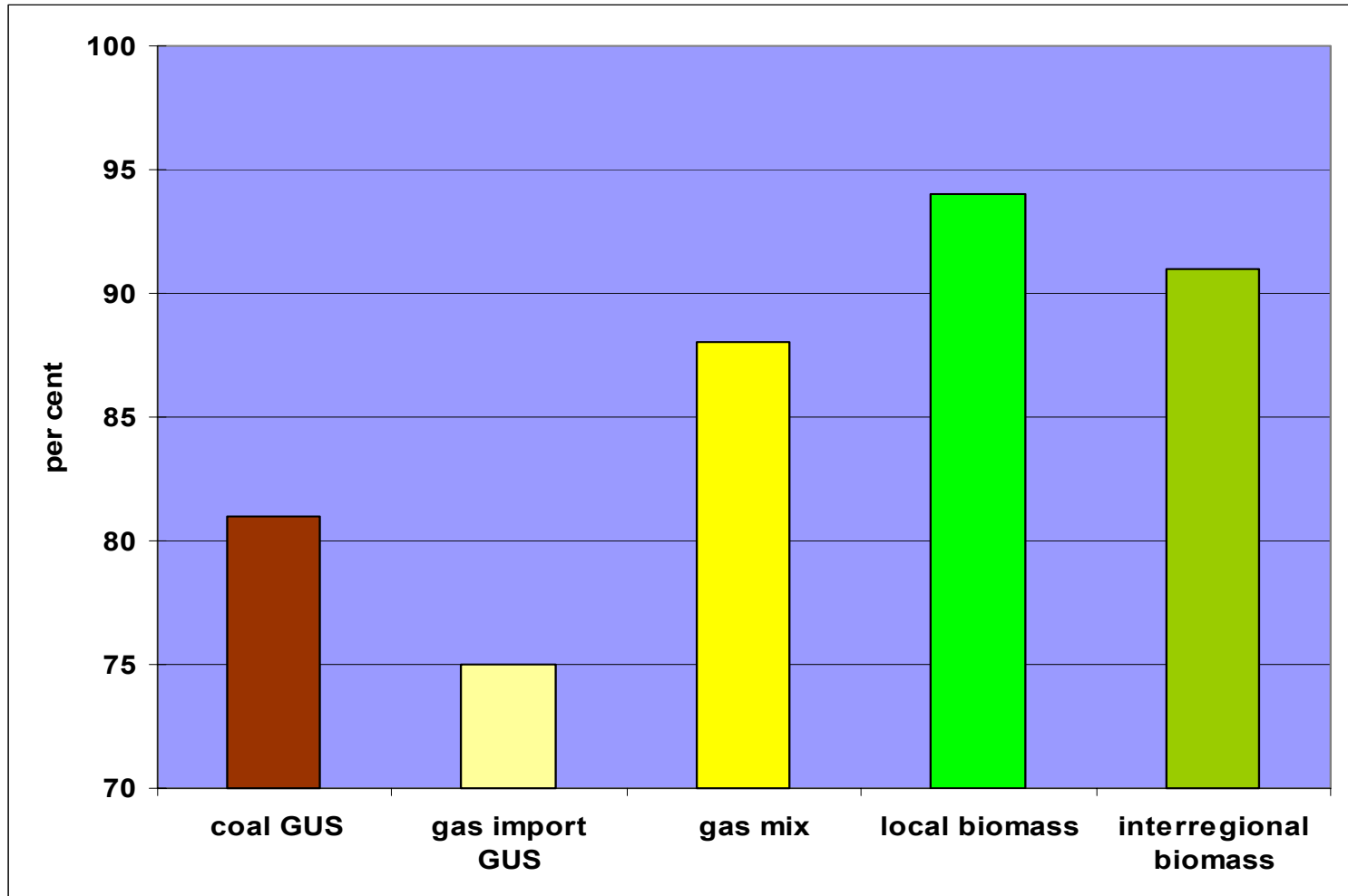
- decreased dependency
- larger number of suppliers
- increased quality range
- additional products
- re-trading possibilities
- hedging tools easier applicable
- development of completely new supply chains
- basis for local development
- Larger quantities easily managable

Disadvantages

- added value in other regions
- lower energy efficiency of total system
- organisation effort increases
- logistical know how necessary
- involvement of banks and financial institutions necessary

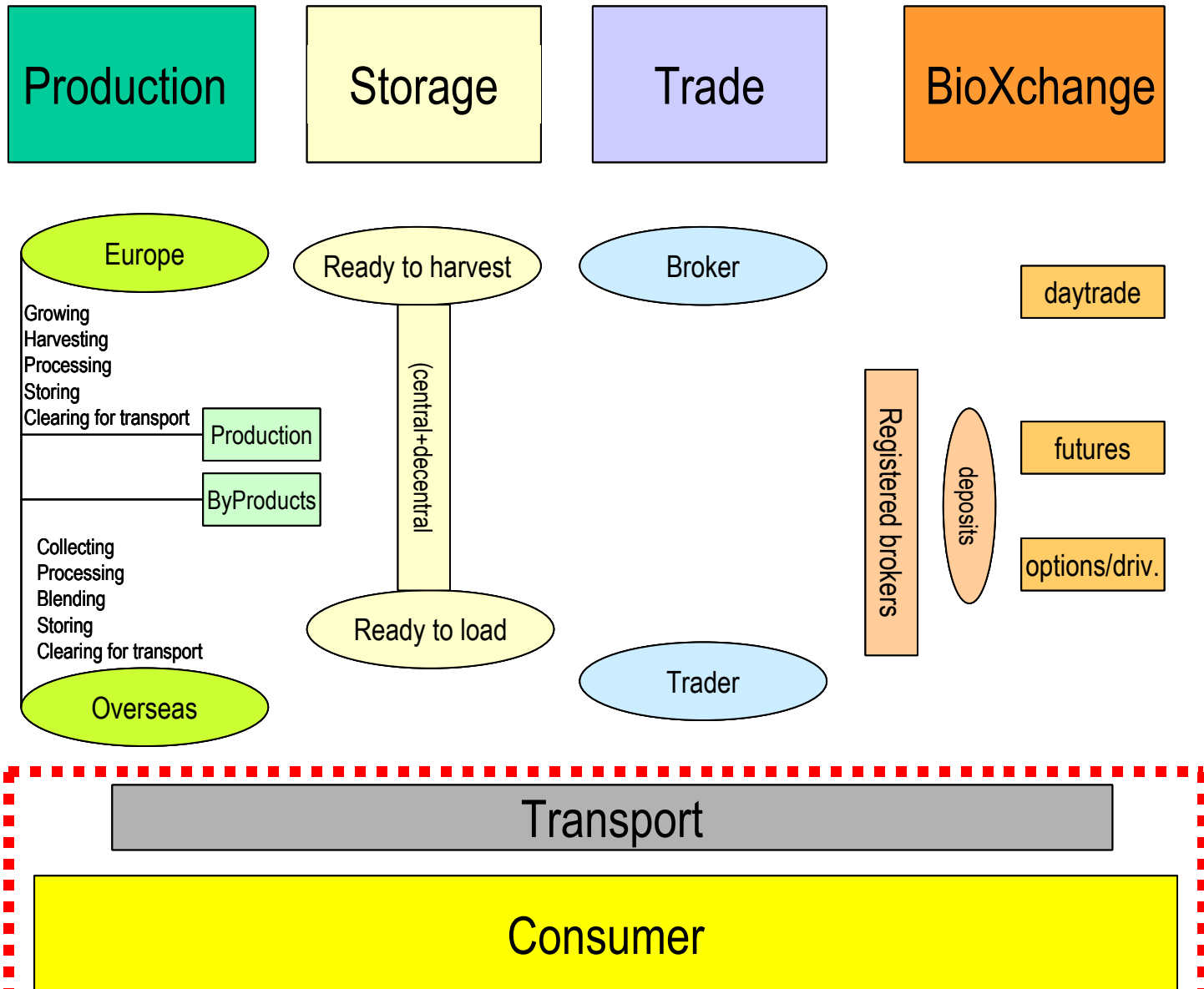


Ratio secondary/primary energy



Source: GEMIS

EBES – basic structure





Products List - Microsoft Internet Explorer von A-Online

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EBES AG
European Bio Energy Services

Products Demand Supply

Products


Wood Fuels

Briquettes	Create Demand	Create Supply
Pellets	Create Demand	Create Supply
Wood Chips	Create Demand	Create Supply
Log Wood	Create Demand	Create Supply
Wood Residues	Create Demand	Create Supply
Recycled Wood	Create Demand	Create Supply
Composition Of Any Goods	Create Demand	Create Supply



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EBES AG
European Bio Energy Services

Product Transaction Terms

Enter Supply: Transaction terms

Supply for product: Recycled Wood Jan 3 2002

Seller

ID

Quantity Tonnes **Price** EUR Per Tonnes

Delivery Date From: Jan 3 2002 To: Jan 3 2002 **Delivery Method** Delivery Method: Truck

PlaceOfFulfilling

Street

Postcode

City

Country

Comments

