

# Governance of dual-use technologies: From the international to the individual level *(Part 2: The Individual level level)*

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Part 1

# TRANSFER CONTROLS: A BOTTOM-UP PERSPECTIVE

# Company interests

- Desire to have commercial relations as free as possible
  - Maximise opportunities for technology development and production
  - Maximise profit generation through sales
  - Minimise cost and impediments that could increase cost
- Transfer controls
  - Interfere with free commercial relations
    - Restrictions on customer selection
    - Administrative burden
      - Administrative requirements
      - Additional staff or outsourcing of administrative requirements
      - Risk assessments
    - Time delays
  - Increase cost

# Nature of technology transfers

- Commercial transactions
  - Trade
  - Assistance
    - Technology may be free for recipient
    - Nevertheless, transfer involves many commercial trade-related activities
- Business decisions
  - Mergers and acquisitions
  - Divestiture of business activities
  - Friendly/hostile company takeovers
  - Corporate breakups
- Undesired technology transfers
  - Theft
    - Propriety information
    - Research, production, process or product data
    - Tangible technologies
    - Hacking
  - Espionage
    - Industrial espionage
    - Government-initiated espionage

# Single-use / dual-use technology transfers

- **Single-use military technology transfers**
  - Government control or involvement in the commercial transaction is standard practice
    - Important aspect of national foreign and security policies
  - International agreements on trade relations allow for exceptions on general international trade rules for military technologies
    - E.g. UN Charter (peace and security provisions); GATT and WTO provisions; etc.
- **Dual-use technology transfers**
  - Affects non-military commercial transactions
  - Transfer controls interfere with free-trade principles
    - Unlike sanctions, they are rather permanent strictures
    - Require security-related imperatives
    - Often part of international weapon-control treaties or decisions by international organisations (e.g. UNSC)

# Export controls & transfer controls

- **Export controls**

- Commercial transactions between two or more countries
- Five broad types of action
  - Export
  - Import
  - Temporary storage
  - Transit across the territory before re-exportation at a different location
  - Processing: value-adding activity before re-exportation

- **Transfer controls**

- Include export controls
- Also cover:
  - Commercial transactions within a country
  - Business decisions
  - Undesired technology transfers

# Types of measures affecting companies – 1

- **International level**
  - Weapon control agreements
    - Multilateral (global) treaties
    - Regional treaties
  - UNSC resolutions (under Chapter VII of the UN Charter)
    - Different aspects of terrorism and crime
    - Sanctions or embargoes against states and non-state actors
  - EU laws, regulations and sanctions (supranational decision-making only applicable to EU members)
- **National level**
  - Implementation legislation required by international agreements
    - Transfer controls
    - Criminal and penal law
  - Implementation of agreements reached within informal technology transfer arrangements (e.g. Australia Group, Nuclear Suppliers Group, etc.)
  - National sanctions or embargoes
  - Other national security or strategic considerations
    - E.g. in foreign acquisition of assets or takeovers

# Types of measures affecting companies – 2

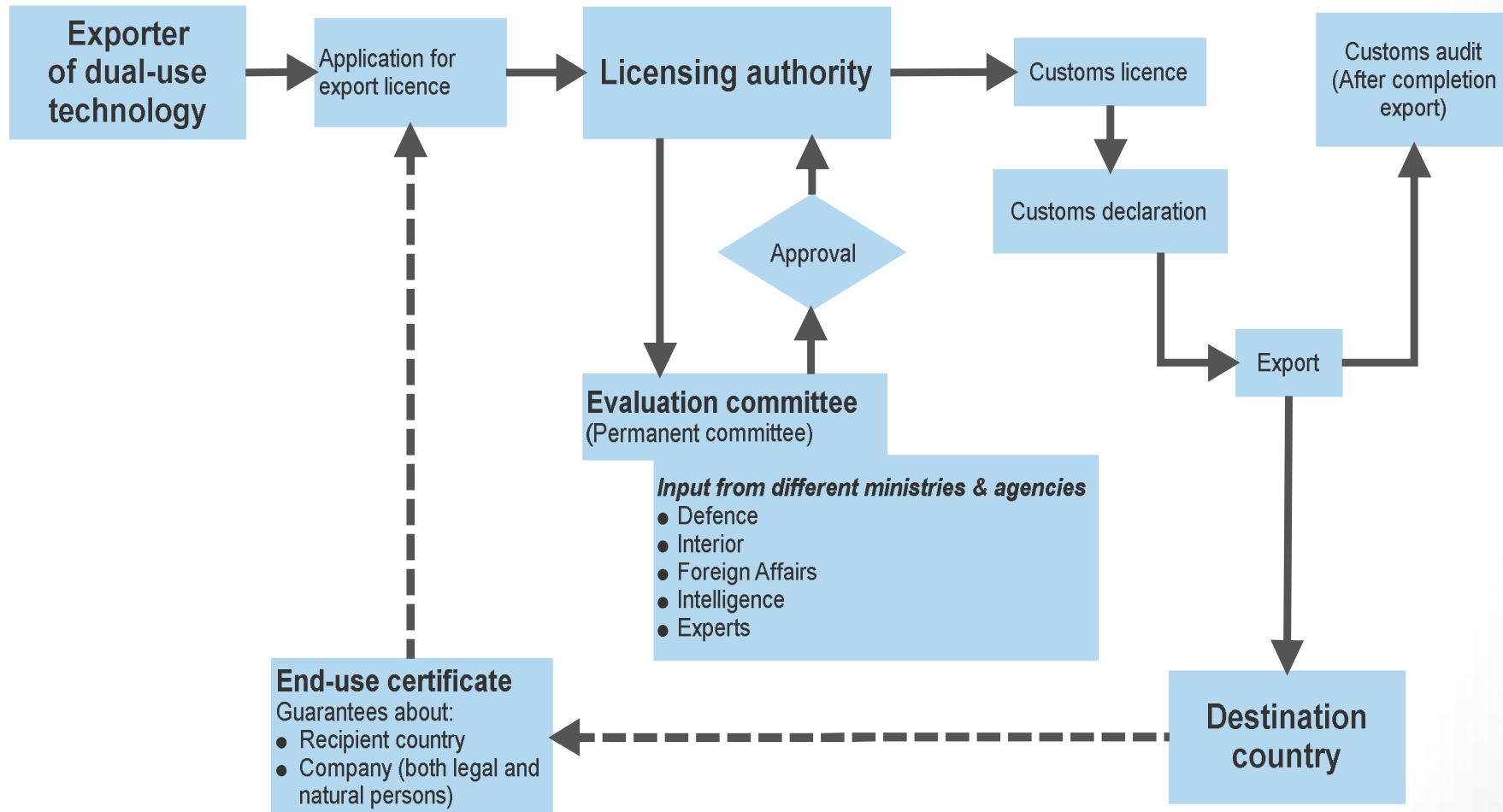
- Technical requirements
  - Health and safety requirements
    - WHO, OIE, FAO, regional organisations
    - National requirements
  - Environmental safety standards
    - International agreements
    - National requirements
  - Transport safety
    - Air, sea, rail or road
    - Packaging standards for hazardous materials
  - Customs regulations
    - ICO
    - National regulations
- Company-level requirements
  - Risk management policies (security & safety) according to national or international standards
  - Prevention of undesired technology transfers



Part 2

ORGANISATION OF NATIONAL TRANSFER CONTROLS:  
*POLICY INSTRUMENTS*

# Applying for an export licence



← - - - Prior requirement

# National regulatory framework

- Sources of the national regulatory framework
  - Treaties and binding resolutions (e.g. UNSC) regulating weapon-relevant technologies
  - International and national standards on health, safety and the environment
  - Temporary binding security-related constraints on technology transfers
    - International sanctions and embargoes (global and regional)
    - National sanctions and embargoes
- Requirements following from the implementation of the national regulatory framework
  - Governmental decisions, ordinances, directives
  - Procedures and administrative requirements
    - Technology transfer application
    - Regulatory oversight and auditing requirements
    - Transparency and reporting (including for international treaty obligations)

# Enforcement of the regulatory framework

- **Criminalisation**

- Legislative process of making specific acts violating the regulatory framework a criminal offence
- Requires laws and other regulatory measures
- Must cover
  - The various dimensions of the technology transfer process
  - The various actors and partners in the technology transfer process

- **Penalisation**

- Laws and other legislative measures that identify the punishment for the criminal offences

- **Enforcement**

- Empowering certain (administrative, law enforcement, etc.) agencies to
  - Monitor technology transfers,
  - Oversee the implementation of the regulatory framework,
  - Act when infringements are noted (corrective, penal)
  - Investigate and act upon discovery of malfeasance

# Outreach and education

- **Assistance with the technology transfer process**
  - Passive assistance tools (e.g. national internet portals with legislative and regulatory information)
  - Assistance desks in relevant ministries and agencies
    - Contact points for general questions
    - Contact points for specific issues (e.g. export authorisation application)
- **Education and training**
  - Specific types of businesses
  - Staff specialisation
  - General education as part of regular courses or other educational programmes
- **Outreach**
  - Proactive engagement of relevant industries and businesses with a view of increasing their overall awareness of obligations and implementation

Part 3

ORGANISATION OF NATIONAL TRANSFER CONTROLS:  
*POLICY IMPLEMENTERS*

# Ministries

- Different ministries play roles in the technology transfer process
  - Administrative accompaniment of the transfer process
  - Monitoring of regulatory conformity of the transfer process
  - Fiscal administration
  - Security assessment
  - Health, safety and environmental monitoring
  - Law enforcement
  - Etc.
- Policy development
  - Legislation
  - Policy and administrative decisions
- Interactions with
  - Parliament regarding the further development of regulatory frameworks
  - Stakeholder communities for regulatory input and outreach
    - Businesses
    - Special interest groups: professional associations, civil society, etc.

# Managing technology transfers

- Licensing authority
  - Issuing export licences
  - Denial of sensitive exports
  - Technical knowledge
    - Important source of information for the exporter
- Customs
  - Border controls
  - Company audits



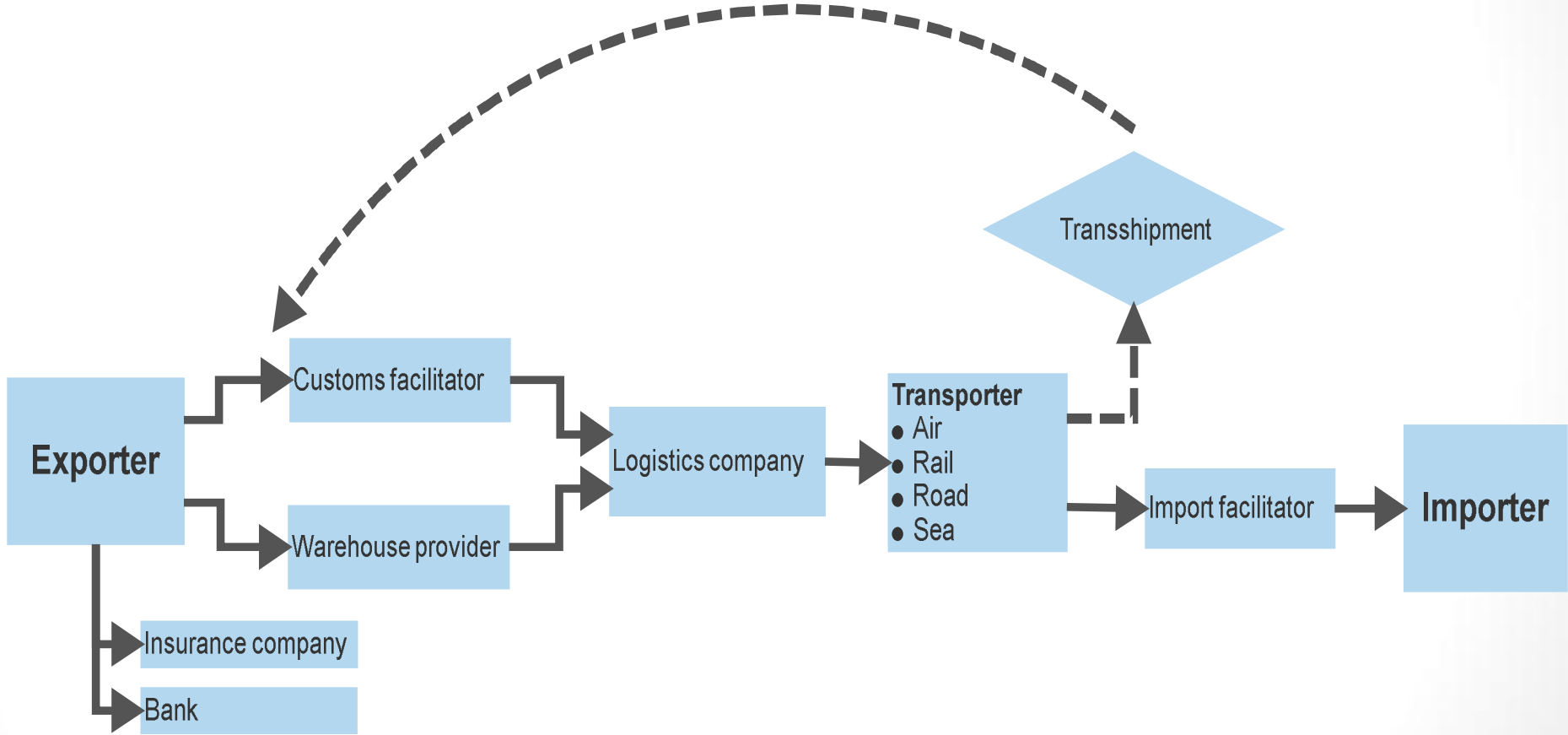
# Preventing illicit transfers

- Intelligence agencies
  - Information gathering
  - Data analysis and threat/risk assessment
  - Notification of threats and risks
- Law enforcement
  - Investigation
  - Prosecution
  - Penalisation

Part 4

ORGANISATION OF NATIONAL TRANSFER CONTROLS:  
*ACTOR CATEGORIES*

# Technology transfer partners



# Suppliers

- Industry (manufacturing)
  - Products
    - Raw materials
    - Semi-finished products
    - Finished products
  - Processes
    - Importation
    - Processing / Value enhancement
    - Exportation
    - Internal transfers
- Services
  - Intangible technology transfers
  - Includes:
    - Consulting
    - Information technology and knowledge economy
    - Training and education
    - Maintenance and repairs

# Facilitators

- Underwriters
  - Investors (in the industrial activity)
  - Financers
  - Insurers
- Facilitators
  - Traders
  - Brokers
    - Goods
    - Customs facilitation
      - Physical persons
      - Automated systems
  - Shippers:
    - Consignor
    - Consignee
    - Transshipment companies

# Knowledge and expertise

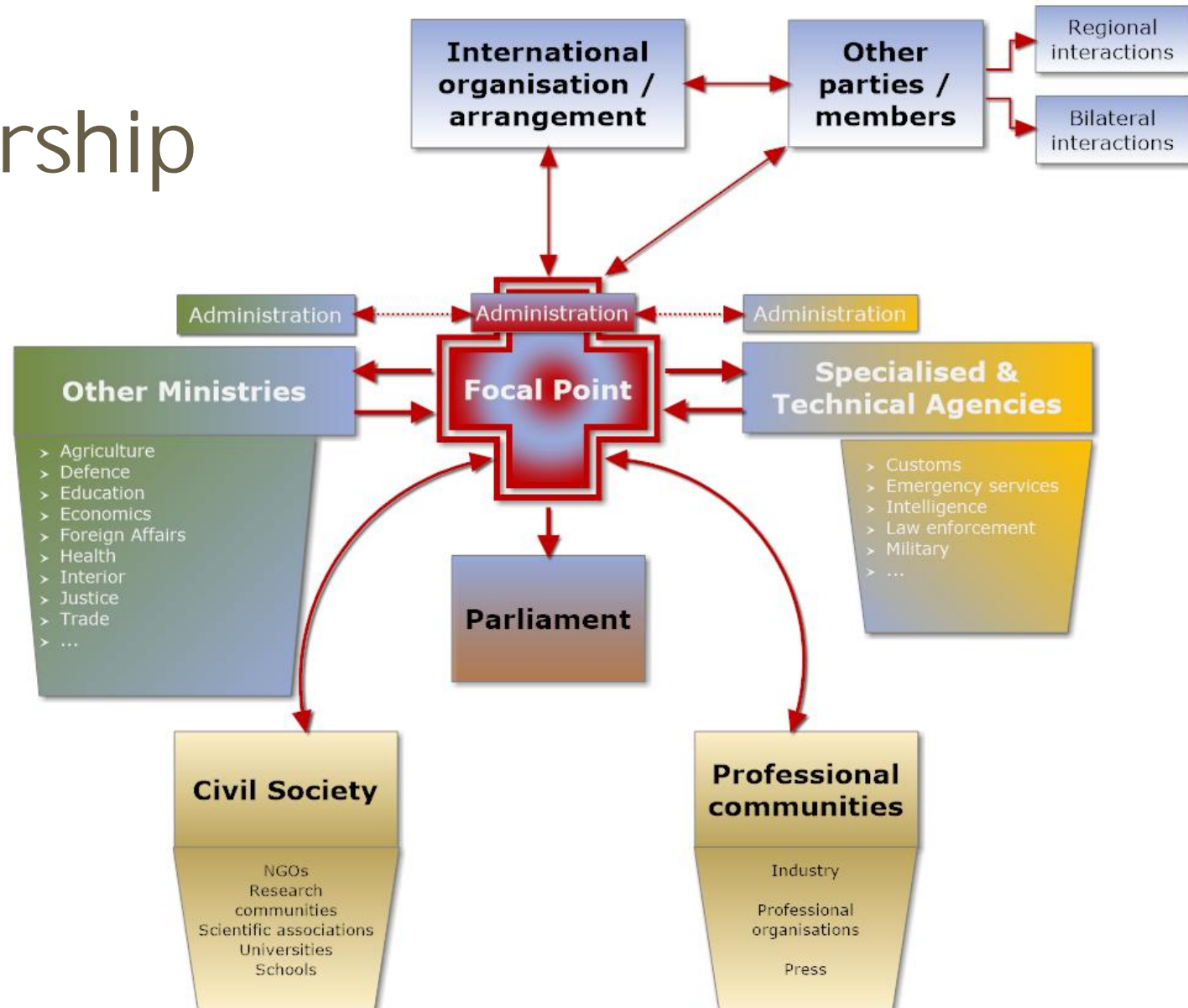
- **Academics**
  - Universities
  - Research institutes and think tanks
- **Scientists and engineers**
  - Research institutes
  - Laboratories and testing facilities
- **Professionals**
  - Technology experts
  - Technicians
- **Civil society**
  - Expertise in various areas, including assistance in treaty implementation, etc.

Part 5

SUMMARY:

*A COMPLEX NETWORK OF STAKEHOLDERS*

# Multi-stakeholdership







# THE TRENCH

**Recalling** where science, industry and military art converged  
**Challenging** entrenched positions

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