



Proliferation Networks Financing and Organization



Modelling the
Proliferation Networks

Proliferation Networks Methodology

- ❖ In depth Study of 2 examples : The AQ Khan Network and the Iraqi Procurement post-91
- ❖ Defining Models
- ❖ Differentiating procurement and selling
- ❖ Network of networks

Provider Networks

Operational Functions

- ❖ Objective : Put forward the most complete offer possible, including transfer of know-how, technology and goods.
- ❖ Three functions to be fulfill :
 - ❖ Technical : be able to satisfy the customer need
 - ❖ Logistic : moving products about, producing and acquiring related/necessary goods
 - ❖ Financial : managing money and its flow (receiving payment, feeding network agents)
 - ❖ **Overall coordination**

Networks

Quick Focus : Financing

- ❖ Two types of agents to finance :
 - ❖ Network agents : working directly for the organization
 - ❖ Outside agents – companies, brokers
- ❖ Two types of money flows :
 - ❖ Cash flow inside the network to minimize the risk of disruption
 - ❖ Bank exchange necessary with outside agents

Provider Networks

Possible structures

- ❖ Star Shaped Structures for a private or semi-private (i.e small) network such as AQ Khan
- ❖ Cyclic shaped Structures for State owned network
- ❖ Clique Structures as possible evolution of star-shaped basic type

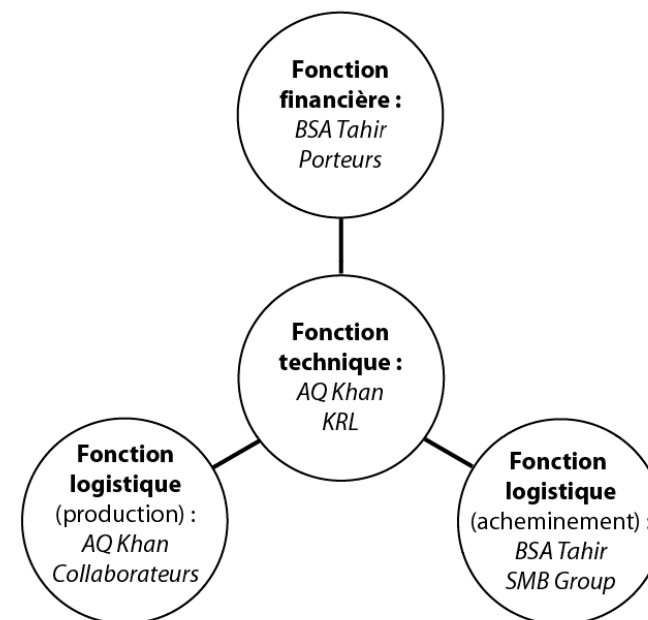


Fig.1 : distribution des fonctions assurées par le réseau Khan

Provider Networks Organization and Methods

- ❖ Provider Networks will need to obtain technology and/or goods from outside to fill their own technical/industrial shortfalls
- ❖ Methods have to be devised to go around existing export controls

Procurement Networks Functional Analysis

- ❖ Two main functions :
 - ❖ Technical : Specify the need in terms of technology or goods to procure
 - ❖ Procurement : sub-branches include → logistic, financing & contracting
- ❖ Specific to procurement network is the need to coordinate the two functions. Failing to do that results in loss of money (Iraqi example pre-1996)

Procurement Networks Organization

- ❖ Using agents abroad as brokers for the network (e.g. Iraqi agents operating under diplomatic cover)
- ❖ Using diplomatic pouch to manage some of the material and financial streams
- ❖ Using relay companies (and banks) abroad to manage logistics/financial aspects of a transaction
- ❖ Procurement methods include : multiple tender, hiding sensitive goods in a list of non sensitive equipment, multiplying front companies & brokers (and transshipping points)
- ❖ Using national assets as much as possible to transport the equipment

Networks Interaction : The Emergence of Network of Networks

- ❖ Technology transfer to create new providers
- ❖ Emergence of an evolutive network of networks
- ❖ Not totally independant from outside sources
- ❖ Interaction at several levels (tech, logistic, financial)

Globalization & the Proliferation Networks

Globalization's influence on the networks is dual :

- ❖ On the plus side : help bypass export control, rapid access to know-how, hide final destination
- ❖ On the minus side : harmonization of export control practices, private sector participation in enforcing the Law, electronic traces



Proliferation Networks Efficiency Criteria

Elementary criteria that can be used to determine a network efficiency and weaknesses :

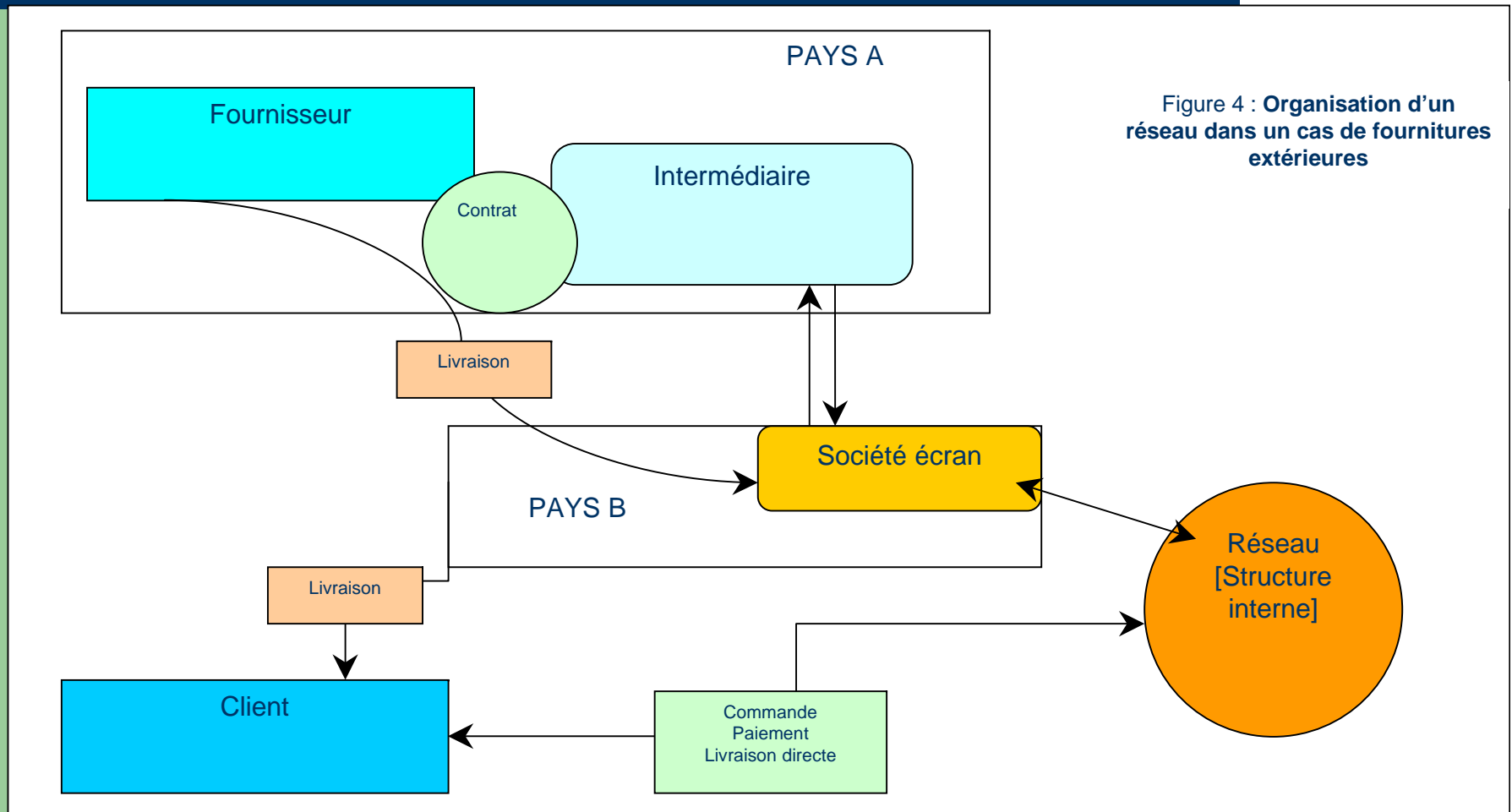
- Size : the number of people and organizations that are implied (and thus the organization resilience, also difficulty of coordination)
- Functional concentration : are they critical functions that depends only on a few individuals ? Existing redundancy in the organization.
- Organizational and Technical Skills
- Efficiency of the coordination between the technical, logistic and financial branches



END



Network organization Procuring Technologies or Goods





Typical Banking Transaction

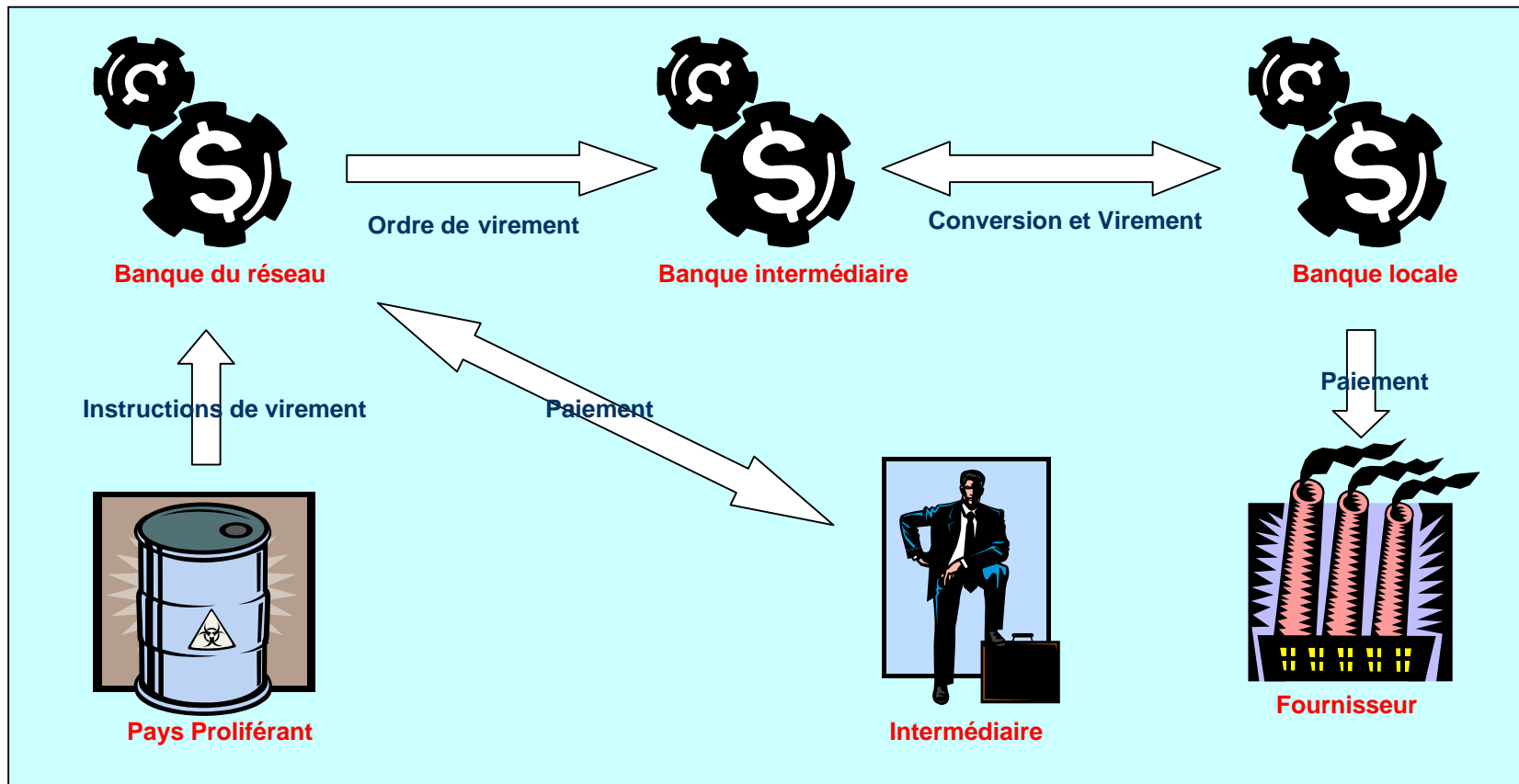


Figure 6 : Schéma de fonctionnement d'une transaction bancaire associée à l'acquisition d'un bien proliférant