



**UNITED
NATIONS**

**Economic Commission
for Europe**



Cost Benefit Analysis of the eTIR system Summary, limitations and recommendations

Agenda item 7.b.i

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**Working Party on Customs Questions affecting Transport
135st session**

1 -4 October 2013

Outline

Informal document GE.1 No.2 (2013)

- Summary of the CBA
- Assessment
- Recommendations

Outline

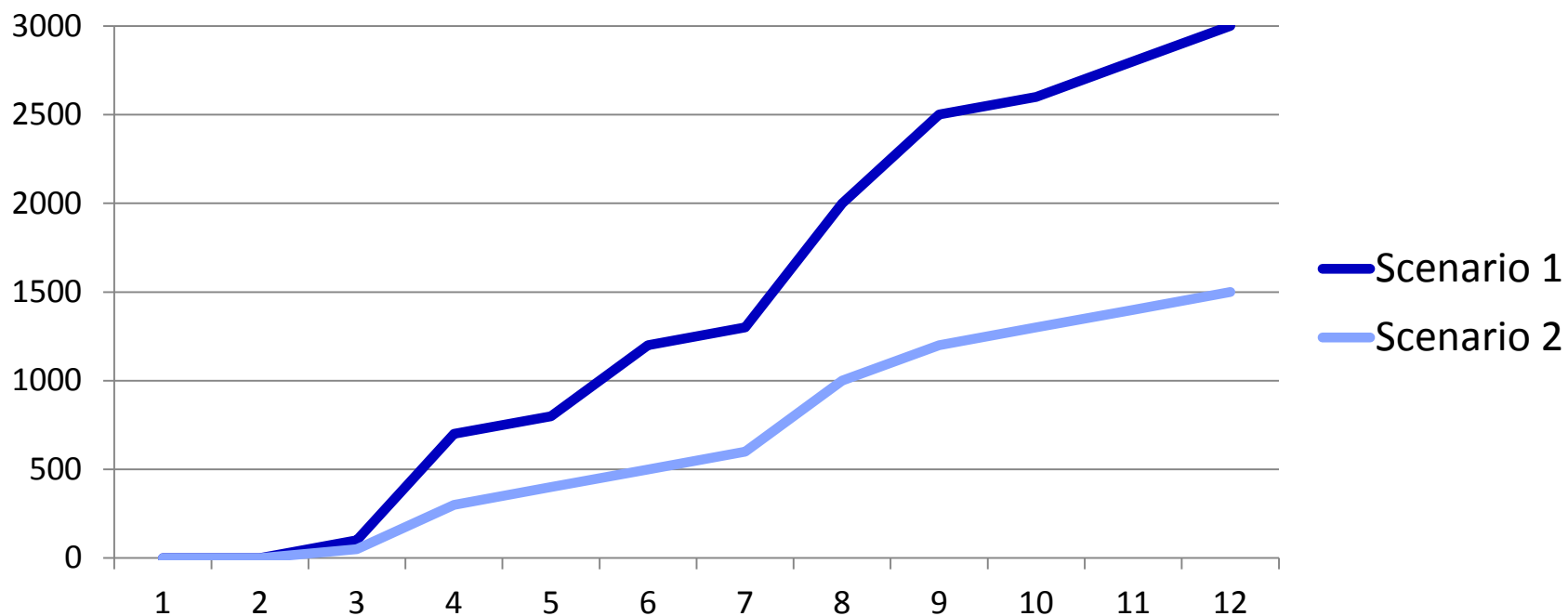
- **Summary of the CBA**
 - Technical options
 - Scenarios
 - Costs
 - Benefits
 - Results
- Assessment
- Recommendations

Technological options

- At premises
- UNOG
- UNICC
- IaaS (Infrastructure as a Service)
- PaaS (Platform as a Service)
- SaaS (Software as a Service)

Scenarios

Year	1	2	3	4	5	6	7	8	9	10	11	12
N° of CP		3	3	3	5	10	10	5	5	5	4	4



Costs

- Development costs
- Initial costs
- Operational and hosting costs
- Helpdesk costs
- Costs to adapt national applications

Development costs

kernel
(ensuring the
electronic
exchange of
eTIR
messages),

the web base
user
interface,
which would
serve as
backup to the
kernel, and

the
administration
console.

924 800 – 1 127 000 USD

Initial Costs

	Min	Max
At premises	1,255,000	1,450,000
UNOG	681,500	792,500
UNICC	632,000	743,000
IaaS	632,000	743,000
PaaS	142,000	183,000
SaaS	10,000	15,000

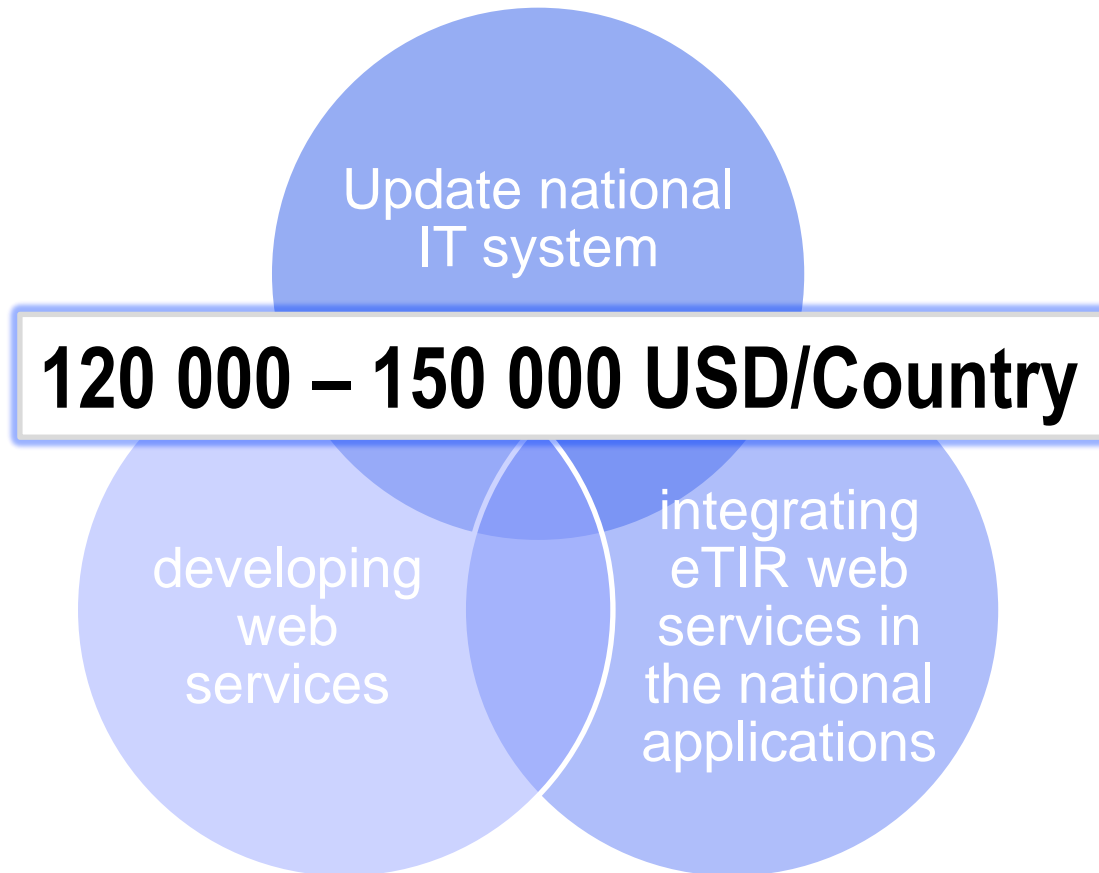
Operational and hosting costs

	Min	Max
At premises	340,419	526,059
UNOG	194,739	243,259
UNICC	167,719	257,059
IaaS	113,402	153,126
PaaS	159,116	180,816
SaaS	1,500,000	3,000,000

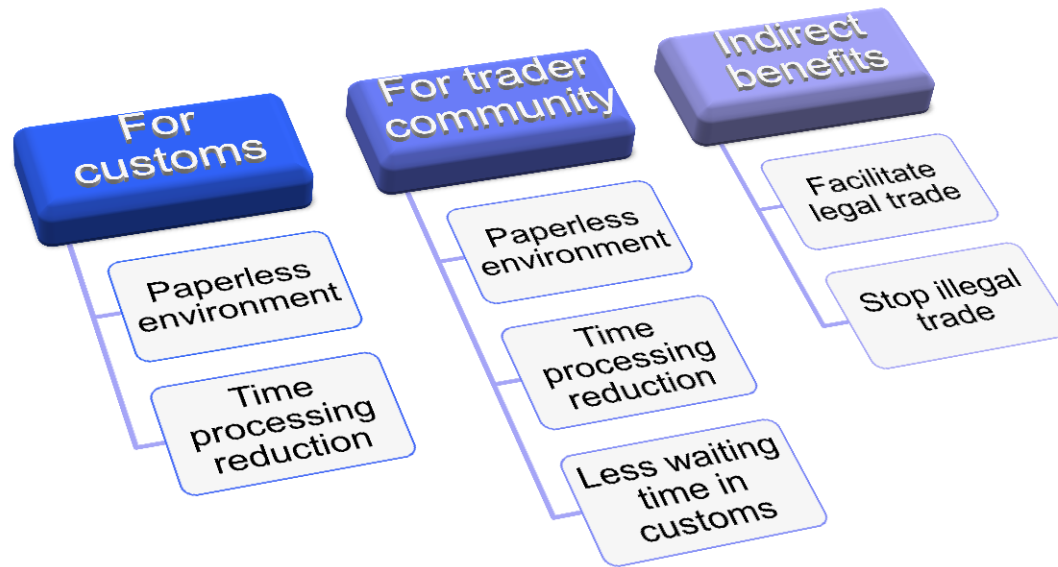
Helpdesk costs

- Minimal helpdesk: 2 IT specialists working 40 hours a week.
- Initial costs: 24 500 – 44 000 USD
- Operating and personnel costs :
126 180 - 216 600 USD/year

Costs to adapt national applications



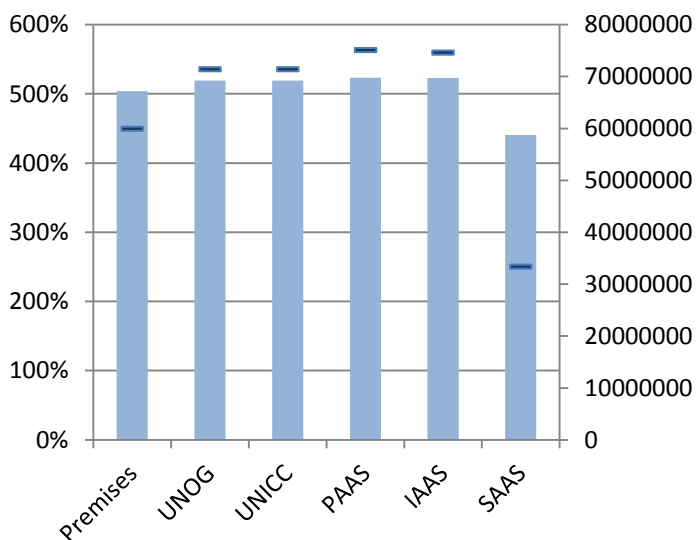
Benefits



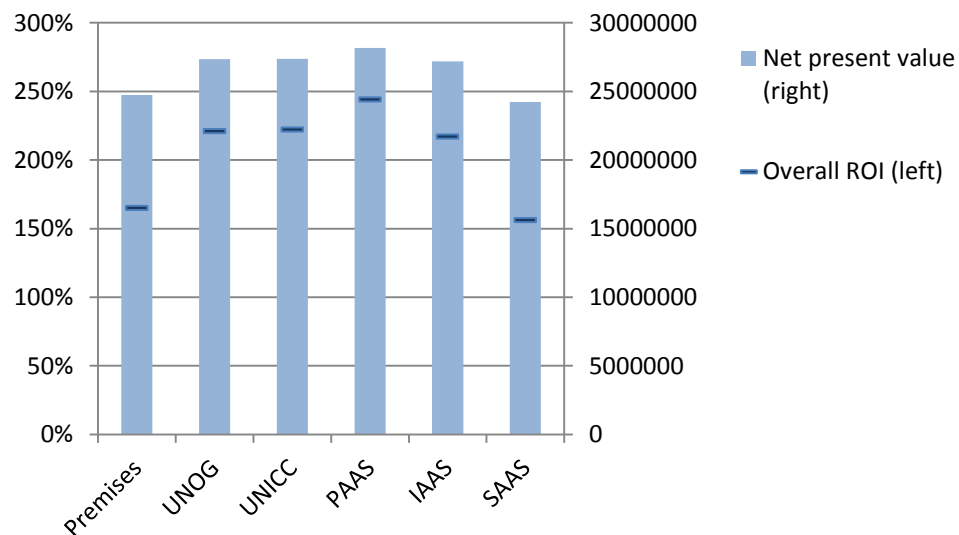
- For Customs: **1.44 USD** / Transport
- For the guarantee chain: **2 USD** / Transport
- For holders: **5.5 USD** / Transport

Results of the CBA

Scenario 1



Scenario 2



Outline

- Summary of the CBA
- **Assessment**
 - General and scope
 - Methodological aspects
- Recommendations

General and scope assessment

- ↑ Good assumptions (eTIR RM), tech. options
- Simple scenarios
- ↓ Missing indirect benefits
- ↓ Missing costs for holders and guarantee chain
- ↓ Missing “of the shelf” technological option
- ↓ Labour costs too low for Geneva

Methodological aspects

- ↑ Function point analysis
- ↑ Detailed cost analysis (incl. risk factors)
- ↑ ROI and NPV (5% disc. rate)

- ↓ CBA based on unit costs

Outline

- Summary of the CBA
- Assessment
- **Recommendations**

Recommendations

- Considering that the eTIR project seems to be highly profitable, it is recommended that the eTIR system should be **implemented as soon as possible**, including at national level, right after the required legal provisions, the technical specifications and the project roadmap are finalized and agreed on.
- Considering the commercial sensibility of the data that will be handled by the eTIR international system and in view of the relatively small costs differences with the cloud solution recommended in the CBA, it is recommended that the eTIR international system be hosted at **UNICC or UNOG data centres**;
- Considering the availability on the market of message broker software, including open source solutions, it is recommended to **consider the use of “off the shelf” solutions** for the development of the eTIR international system.
- Considering the large benefits for TIR Carnet holders, a potential avenue to explore for the financing of the eTIR international system seems to be through a **contributory system per TIR transport**, similar to the one used for TIRExB.



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