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

Agenda item 5

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Informal Ad hoc Expert Group on Conceptual and Technical Aspects of Computerization of the TIR Procedure
22nd session
30-31 May 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

<table>
<thead>
<tr>
<th>Year</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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**Graph:**
- **Scenario 1**
- **Scenario 2**
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

<table>
<thead>
<tr>
<th></th>
<th>Min</th>
<th>Max</th>
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<tr>
<td>At premises</td>
<td>1,255,000</td>
<td>1,450,000</td>
</tr>
<tr>
<td>UNOG</td>
<td>681,500</td>
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<tr>
<td>UNICC</td>
<td>632,000</td>
<td>743,000</td>
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<td>IaaS</td>
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<tr>
<td>PaaS</td>
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## Operational and hosting costs

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<td>SaaS</td>
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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

Update national IT system

120 000 – 150 000 USD/Country

developing web services

integrating eTIR web services in the 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**

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<tr>
<th>Component</th>
<th>Net Present Value</th>
<th>Overall ROI</th>
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**Scenario 2**

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<th>Overall ROI (left)</th>
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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 for all parties involved in the TIR procedure, in particular TIR Carnet holders, it is recommended that the eTIR international system be implemented as soon as possible and that countries start working on the interoperability between their IT systems and the eTIR international system, as well as on the preparation of the required legal provisions;

- Considering the large benefits for TIR Carnet holders, a potential avenue to explore seems to be the financing of the eTIR international system through a contributory system per TIR transport, similar to the one used for TIRExB.

- 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 of orchestration software on the market, it is recommended to consider the use of “off the shelf” solutions to implement the kernel of the eTIR international system.
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