



eTIR

Cost Benefits Analysis

September 25, 2012



Outlines

Main objectives

eTIR main components

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Costs

Benefits

Cost Benefit Analysis

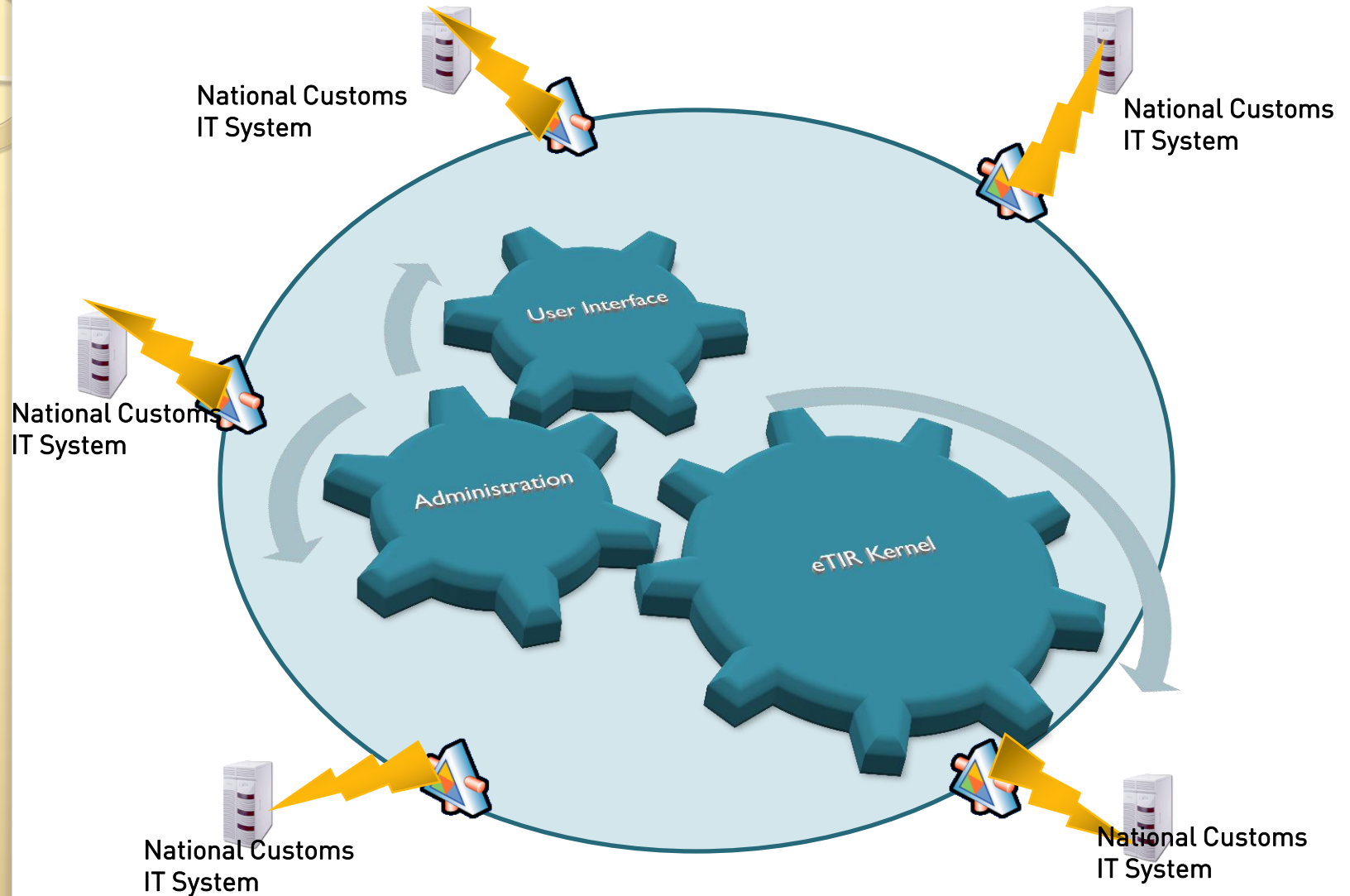
Recommendations

Next steps

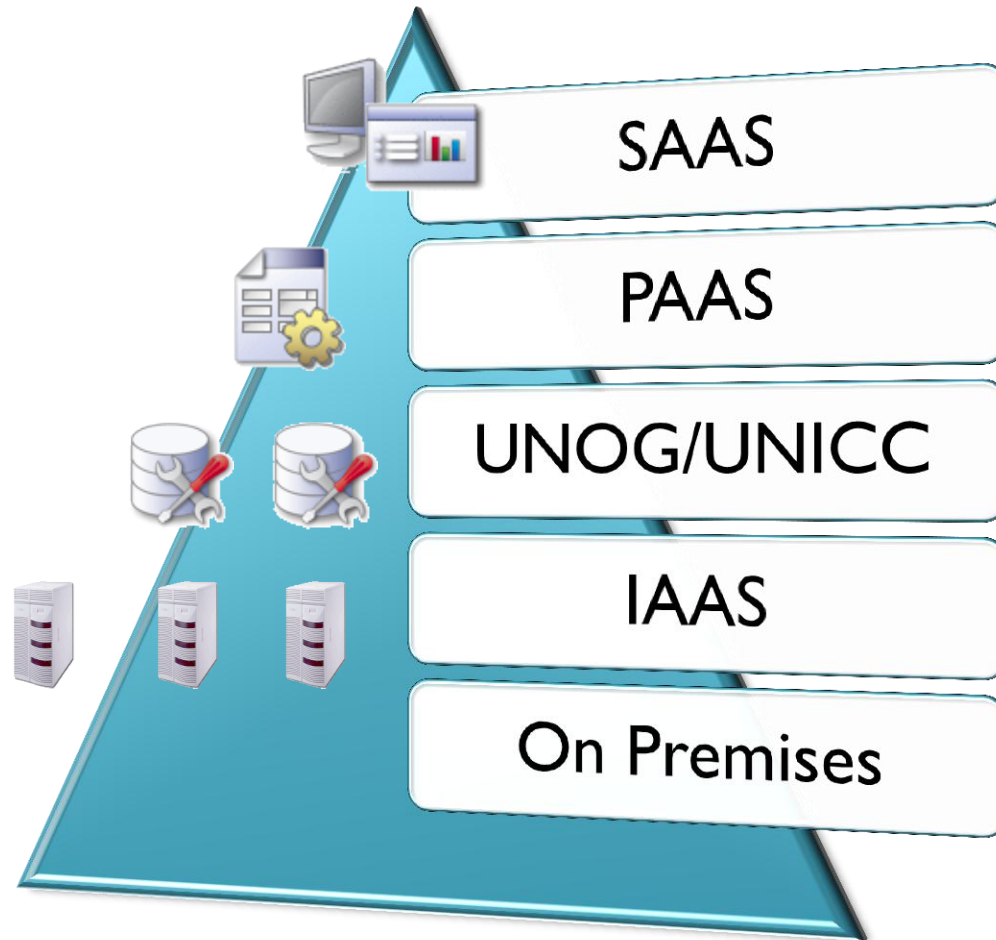
Main objectives

- From a technical and financial perspective, analyze the following scenarios for the implementation of the eTIR system :
 - Gradual implementation of the eTIR system over a 10 year period (reaching 3 million TIR transports);
 - Gradual implementation of the eTIR system over a 10 year period, while only 1.5 million of TIR transports will be computerized.
- Defining and analyzing various architectural alternatives
- Estimate the software development costs for eTIR international system (FPA)
- Evaluate the total cost for the various architecture alternatives
- Estimate the benefits (direct) and calculate the ROI and NPV
- Make recommendations

eTIR Main Components



eTIR Architectural alternatives



Costs



Benefits



CBA - eTIR gradually implemented

(reaching 3M TIR transports)

			Premises	UNOG	UNICC	PAAS	IAAS	SAAS
Costs	Total Dev, Operational;	Development	924,800	924,800	924,800	924,800	924,800	0
		Initial	1,255,000	681,500	632,000	192,000	632,000	60,000
		Operational+Hostin	2,210,000	1,190,000	850,000	1,020,000	680,000	8,500,000
	Total Dev, Operationa;	4,389,800	2,796,300	2,406,800	2,136,800	2,236,800	8,560,000	
	Help Desk	1,286,300	1,286,300	1,286,300	1,286,300	1,286,300	1,286,300	
National App	8,550,000	8,550,000	8,550,000	8,550,000	8,550,000	8,550,000		
Total Costs		14,226,100	12,632,600	12,243,100	11,973,100	12,073,100	18,396,300	
Total Costs (incl. 20% risk factor)		17,071,320	15,159,120	14,691,720	14,367,720	14,487,720	22,075,560	
Discounted Costs (incl. risk factor)		13,490,985	12,021,268	11,689,412	11,336,844	11,551,097	16,192,129	
Benefits for Customs (incl. 20% risk factor)		19,550,000	19,550,000	19,550,000	19,550,000	19,550,000	19,550,000	
Total Benefits (incl. 20% risk factor)		121,210,000	121,210,000	121,210,000	121,210,000	121,210,000	121,210,000	
Discounted Customs Benefits (incl.risk factor)		13,255,247	13,255,247	13,255,247	13,255,247	13,255,247	13,255,247	
Discounted Overall Benefits (incl.risk factor)		82,182,532	82,182,532	82,182,532	82,182,532	82,182,532	82,182,532	
ROI for Customs		-2%	10%	13%	17%	15%	-18%	
Overall ROI		509%	584%	603%	625%	611%	408%	
Net present value		43,002,042	44,471,759	44,803,614	45,156,183	44,941,930	40,300,898	

CBA - eTIR gradually implemented

(reaching 1.5M TIR transports)

			Premises	UNOG	UNICC	PAAS	IAAS	SAAS
Costs	Total Dev, Operational;	Development	924,800	924,800	924,800	924,800	924,800	0
		Initial	1,255,000	681,500	632,000	192,000	632,000	60,000
		Operational+Hostin	2,210,000	577,500	412,500	495,000	330,000	4,125,000
	Total Dev, Operationa;		4,389,800	2,183,800	1,969,300	1,611,800	1,886,800	4,185,000
	Help Desk		1,286,300	1,286,300	1,286,300	1,286,300	1,286,300	1,286,300
	National App		8,550,000	8,550,000	8,550,000	8,550,000	8,550,000	8,550,000
Total Costs			14,226,100	12,020,100	11,805,600	11,448,100	11,723,100	14,021,300
Total Costs (incl. 20% risk factor)			17,071,320	14,424,120	14,166,720	13,737,720	14,067,720	16,825,560
Discounted Costs (incl. risk factor)			13,490,985	11,520,977	11,332,061	10,908,023	11,265,216	12,618,620
Benefits for Customs (incl. 20% risk factor)			9,487,500	9,487,500	9,487,500	9,487,500	9,487,500	9,487,500
Total Benefits (incl. 20% risk factor)			58,822,500	58,822,500	58,822,500	58,822,500	58,822,500	58,822,500
Discounted Customs Benefits (incl.risk factor)			6,406,022	6,406,022	6,406,022	6,406,022	6,406,022	6,406,022
Discounted Overall Benefits (incl.risk factor)			39,717,335	39,717,335	39,717,335	39,717,335	39,717,335	39,717,335
ROI for Customs			-53%	-44%	-43%	-41%	-43%	-49%
Overall ROI			194%	245%	250%	264%	253%	215%
Net present value			13,689,953	15,659,961	15,848,877	16,272,916	15,915,722	14,562,318

Best architectural solutions

1. Implementation of eTIR using Microsoft PAAS (The best from the technical point of view, and the best from ROI point of view)

2 Implementation of eTIR using UNICC IT services (places 2nd, 3rd from technical point of view, places 2nd from ROI point of view)

3 Implementation of eTIR using UNOG IT services (places 2nd, 3rd from the technical point of view, places 3rd from ROI point of view)

Consultant's recommendations

- It is better to implement eTIR as soon as possible, in order to increase the benefits it can offer;
- A minimal usage of eTIR system is recommended to have a positive ROI for Customs.

Next steps

- Considerations by Customs and the transport industry of the recommended options to implement the eTIR project
- Study the possibilities to finance the implementation of the eTIR project