E-GP IMPLEMENTATION TYPES

WITH A FOCUS ON THE AFRICAN CONTINENT

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II PRESENTATION OF THE 3 IMPLEMENTATION TYPES

III E-GP EDITORS MARKET SURVEY

IV COST MODELING & BENEFITS COSTS RATIOS

V RESULTS OF THE COST BENEFITS ANALYSIS

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Methodology used to compare the 3 implementation types

Starting assumption

Data set creation

Report

1 Definition of a typical e-GP client

- Functional coverage
- # of users
- Project

2 Open market study from 18 eGP suppliers

- Functional coverage
- Capacities
- References
- Costs $

3 Survey of all 54 African governments

- Planning
- Costs $
- Good practices

4 Interviews with 5 governments and Feedback from CKS and The World Bank experience

5 Explanation of the major differences between the modes

Custom	COTS	SaaS

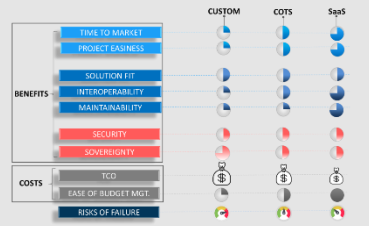
6 Modeling of comparative costs between IT – Over 5 years

	Custom	COTS	SaaS
Design			
Build			
Run			

7 Calculation of BCR ratios

	<1b$	>1,5b$	>3b$
Design			
Build			
Run			

8 Cost Benefit Analysis



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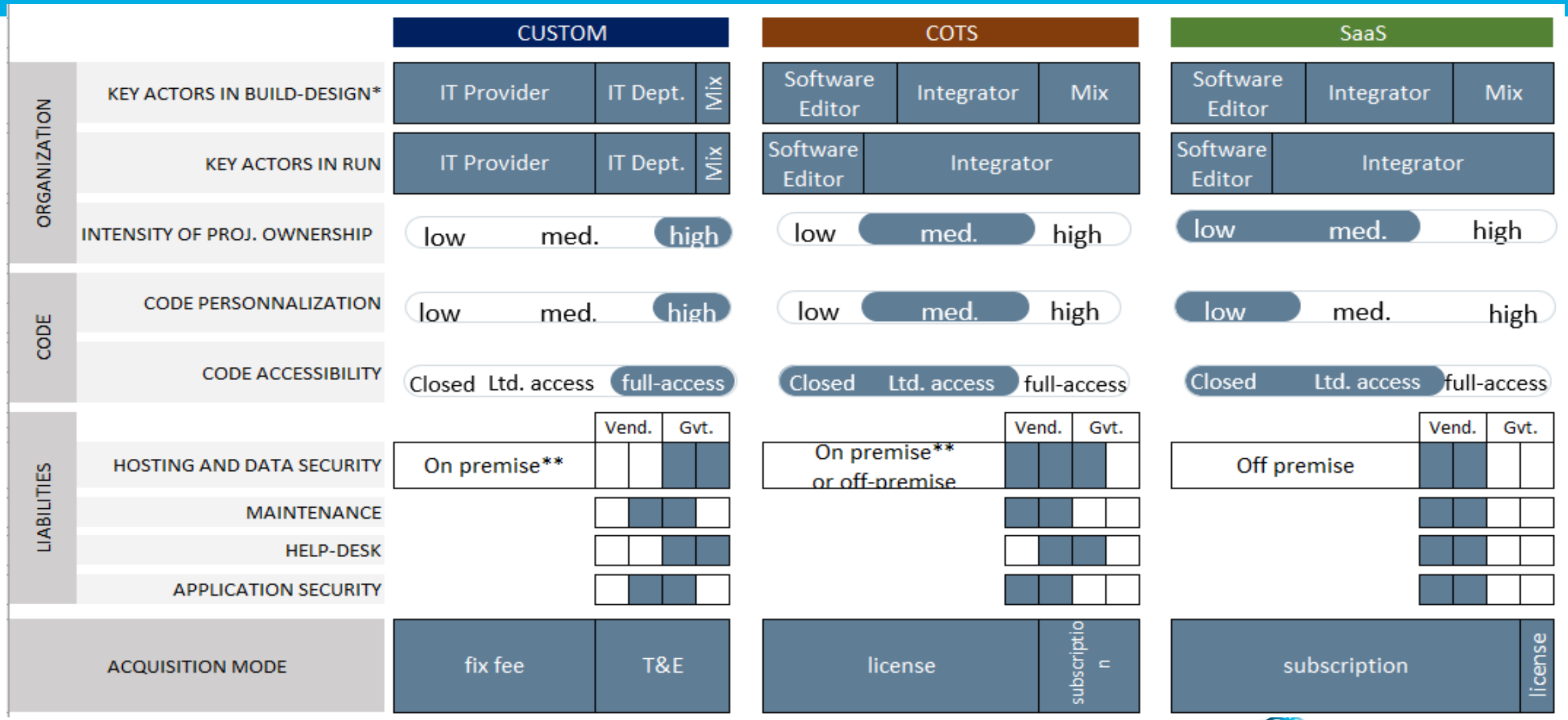
CSW vs COTS vs SaaS



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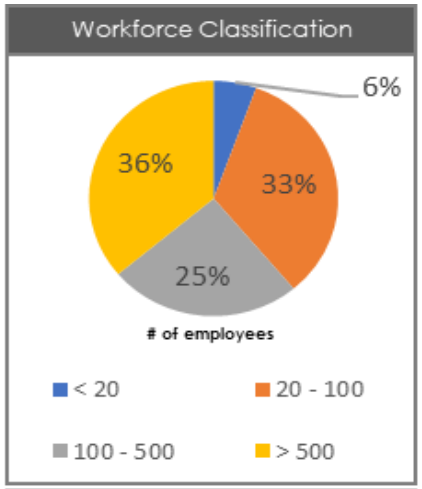
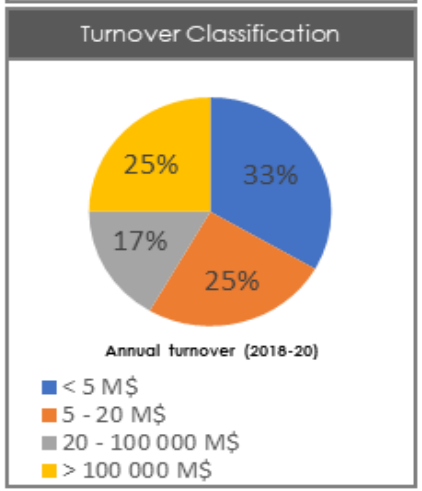
Market survey: Profiles of the e-GP editors

Country classification	
The United-States of America	11
France	4
The United-Kingdom	4
Canada	2
Finland	2
India	2
Other	11



Creation Date Classification	
2020 and after	0
From 2010 to 2020	5
From 2005 to 2010	5
From 2000 to 2005	8
From 1995 to 2000	8
From 1990 to 1995	2
From 1980 to 1990	5
Prior to 1980	3



Most suppliers are from **North America** (USA and Canada) and **Europe**.

Leading firms of the global Source to Pay suites editor market.

Subsidiary of larger corporations

Medium aged companies : Most were created between **1995 and 2005**.

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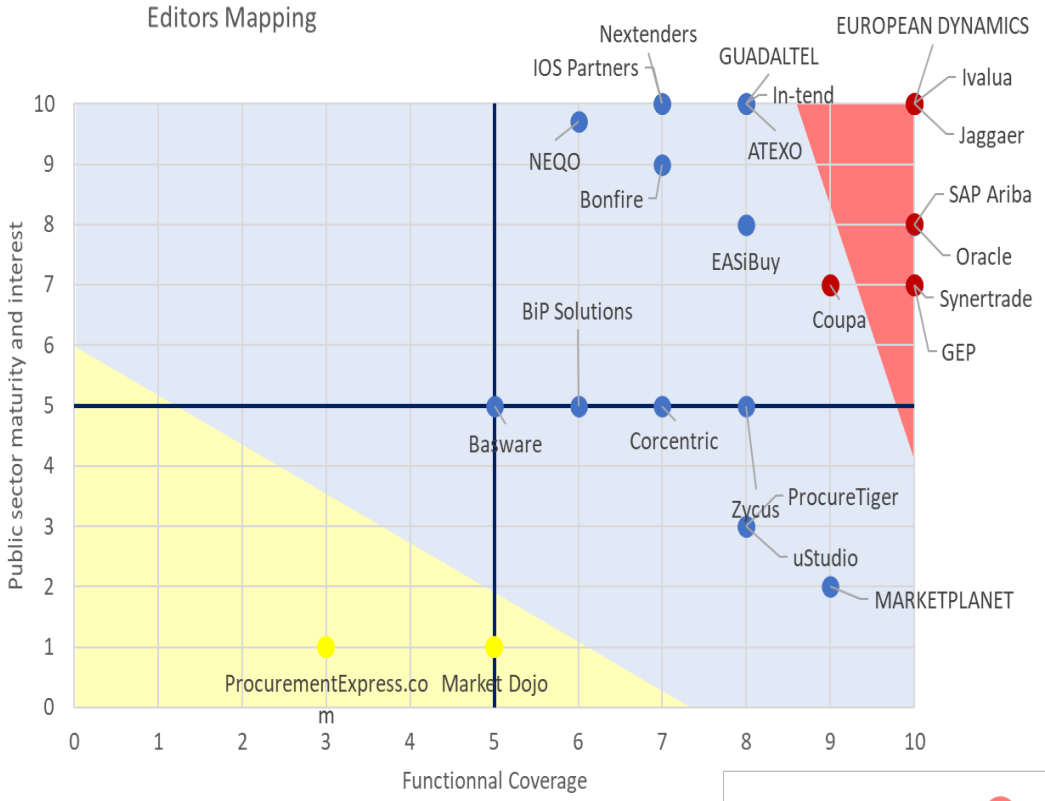
Three different types of e-GP editors



Mapping and positioning of the e-GP editors

METHODOLOGY

18 Editors surveyed

2 axes of analysis

- **Functional coverage**
- Public sector **maturity** and **interest**

	Generalist full suite	**E-GP Specialist**	**Limited scope suppliers**
Functional coverage	• Cover **most of the required functionalities**	• Cover less modules than Generalist • Offer **more advanced feature in their areas of specialization**	• Cover **only a small part of the expected e-GP features.** • However, **their expertise on their functional coverage is recognized**.
Public sector maturity & interest	• **Not the best positioned**. • But **increasing interest** for the public sector	• **Major maturity/interest for the public sector** • Cover the core e-GP features	• Do not necessarily **aim at public procurement entities.**

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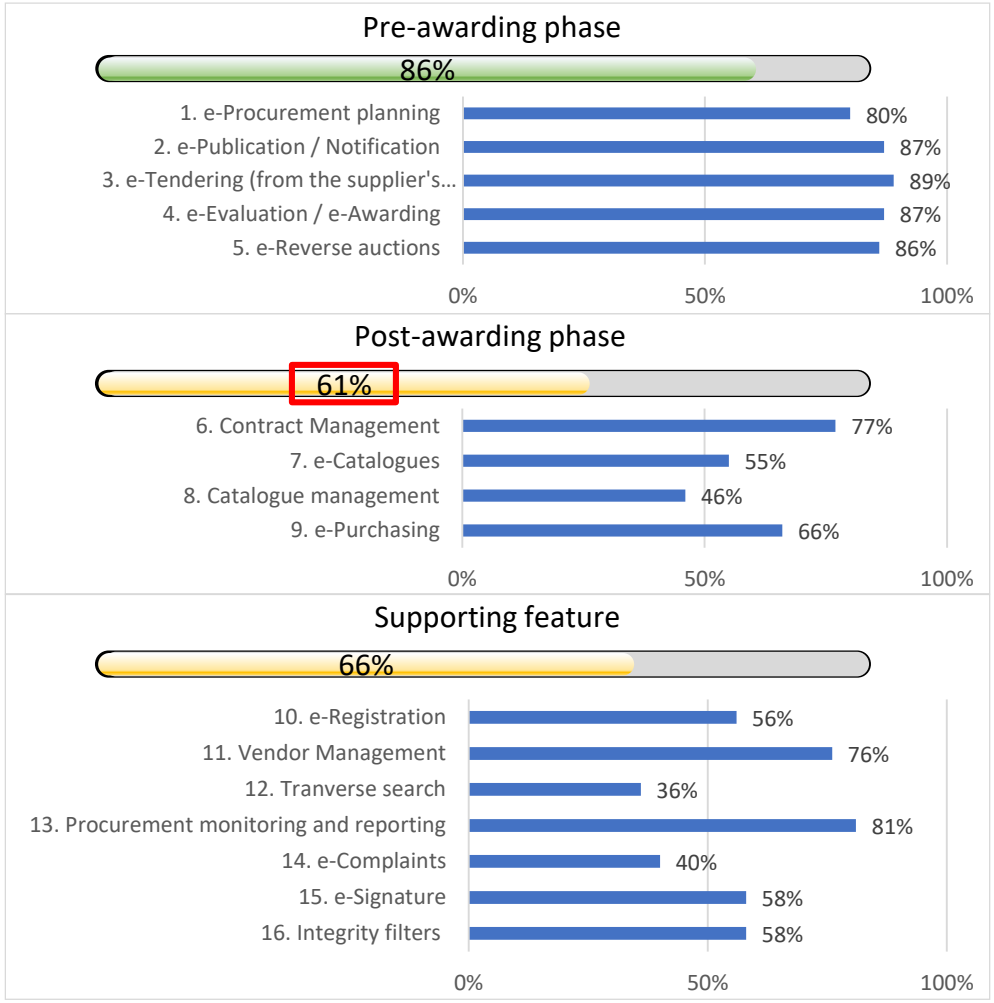
Market coverage of main e-GP functional areas



Pre-awarding Phase

- **Best covered**
- E-tendering & e evaluation features almost **covered by every supplier**

Post-awarding Phase

- **Least well covered**
- Functionalities related to **e-catalogues** are not very well mastered

Supporting feature

- Very **uneven coverage** according to the modules
- Some **support functionalities** are **only slightly covered by e-GP editors**

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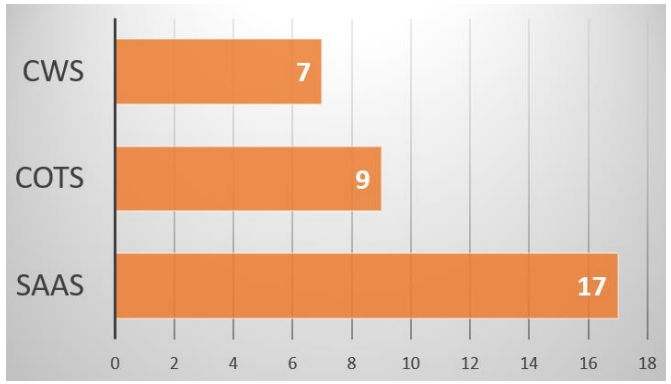
Market analysis

Number of suppliers per e-GP type

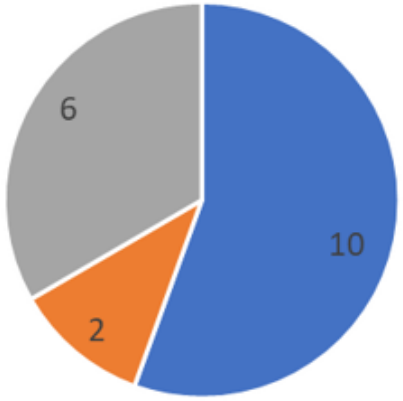


Average Shift compared to initial schedule

Maximum observed

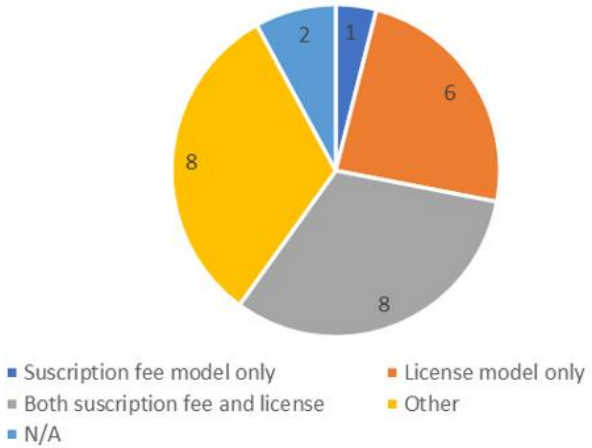
Minimum observed

On-premise implementation experiences

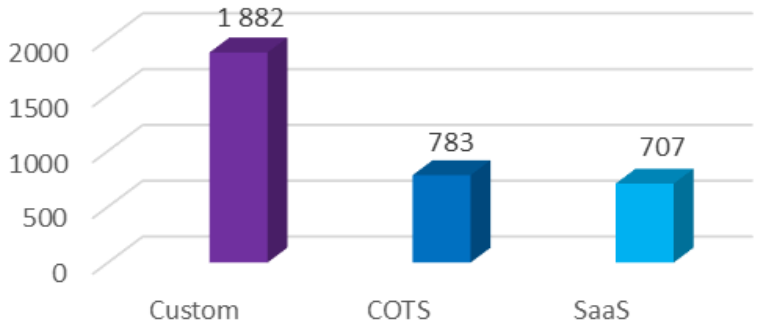


- Editors who have already implemented their solution on-premise
- Editors who have never implemented their solution on-premise but would consider to doing so
- Editors who have never implemented their solution on-premise and would not consider to doing so

Number of providers by financial model



Design & Build budget per implementation type (K$) - use case



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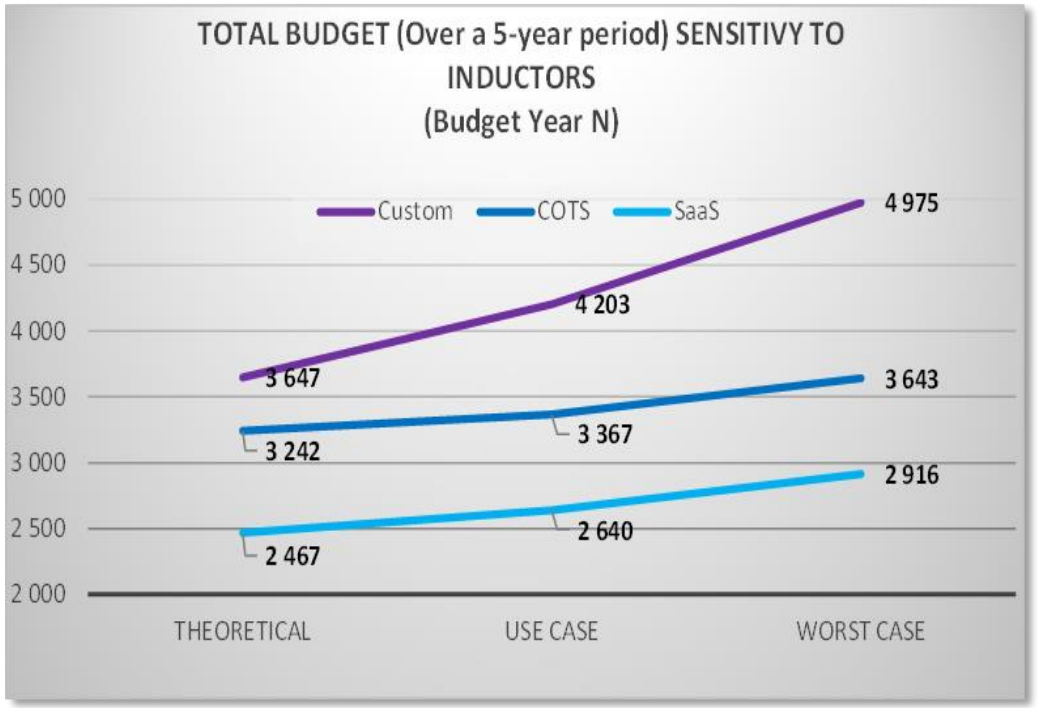
Total cost per implementation type over 5 years

Total cost CUSTOM e-GP projects = **+60% than SaaS projects**
Total cost CUSTOM e-GP projects = **+25% than COTS projects with low level of customizations**

Costs of managing corrective maintenance, technical infrastructure, and various layers **= Higher in the CUSTOM/COTS mode than in the SaaS mode.**



Cost to maintain and administer = **Much more expensive in CUSTOM and COTS types**

Costs of upgrades = **Much more expensive in CUSTOM and COTS types** (requires a complete software development)

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Best return on investment

Analysis of the BCR Ratio for countries with a public procurement spending of :

< $1 billion

	Theoretical	Use case	Worst Case
CUSTOM	1.26	0.94	0.59
COTS	1.57	1.37	1.05
SaaS	2.20	1.95	1.58

- Only SaaS projects **provide a financial benefit in all scenarios**.
- **SaaS is the most relevant** implementation types for countries where public procurement **does not reach a critical size.**

= $1,5 billion

	Theoretical	Use case	Worst Case
CUSTOM	2.27	1.72	1.06
COTS	2.83	2.47	1.90
SaaS	3.96	3.51	2.84

- SaaS projects are **interesting to implement in any scenario** with always a **higher return on investment** than other projects
- COTS projects remain **interesting and profitable regardless of the scenario**, even if the estimated **returns on investment are slightly lower than those of a SaaS solutions.**
- CUSTOM projects have a **higher risk profile** than the other two implementation types.

= $3 billion

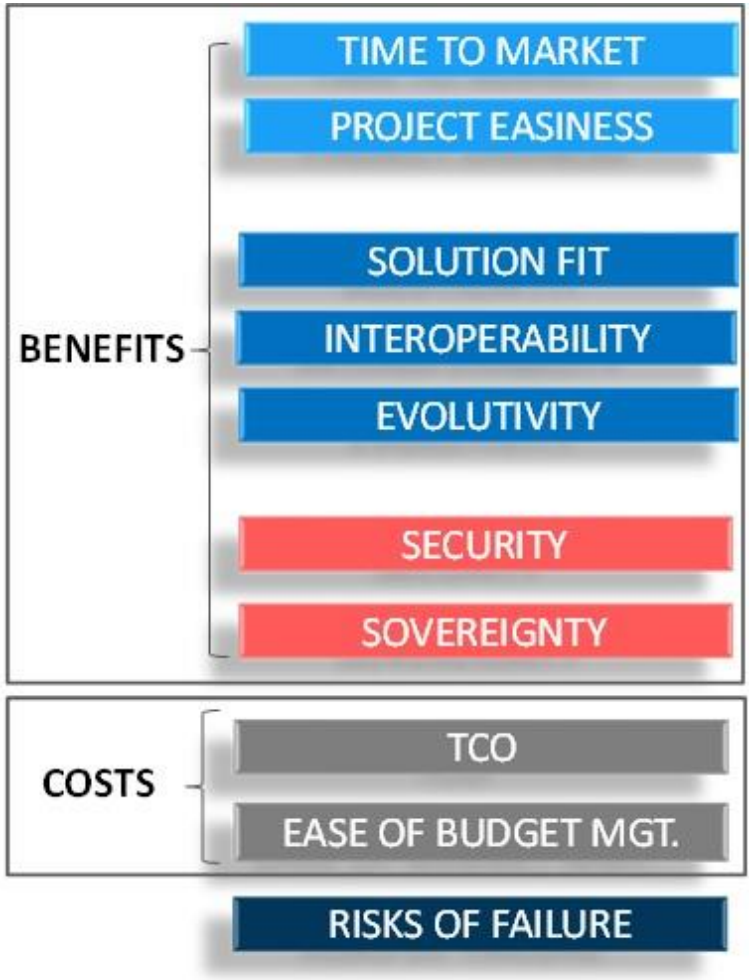
	Theoretical	Use case	Worst Case
CUSTOM	4,01	3,00	1,84
COTS	4,97	4,40	3,39
SaaS	6,84	6,02	4,53

- SaaS projects are **interesting to implement in any scenario** with always a **higher return on investment** than other projects.
- COTS projects remain **interesting and profitable regardless of the scenario**, even if the estimated **returns on investment are slightly lower than those of a SaaS solutions.**
- CUSTOM projects have a **higher risk profile** than the other two implementation types.

Conclusion : Overall, the more African governments invest upfront in implementing an e-GP solution, the greater the return on investment will be

Cost benefits analysis

The comparison of the benefits and drawbacks of the three implementation types is based on the following evaluation criteria:



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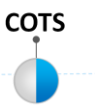
E-GP solutions with the lower level of customization are easiest to implement

PROJECT EASINESS



with high level of customizations

- Very **demanding project** from the "customer" perspective
- Project management start **from scratch** + do **not draw on past experiences**
- Must cover **all dimensions** associated with the IT development process
- Must coordinate numerous **stakeholders and expertise**

with low level of customizations

- Simplification due to a **pre-packaged solution** and **the expertise of deploying the application to numerous customers**
- Require less **technical expertise** to mobilize and coordinate
- Project management is **less caught up in technical issues** and more **focused on how to model the functional expectations**

TIME TO MARKET

with high level of customizations

with low level of customizations

Procurement phase

9 MONTHS

9 MONTHS

Design & Build phase

Minimum **12** months | Average **25** months | Maximum **60** months

Use Case **9** months | Degraded Case **13** months

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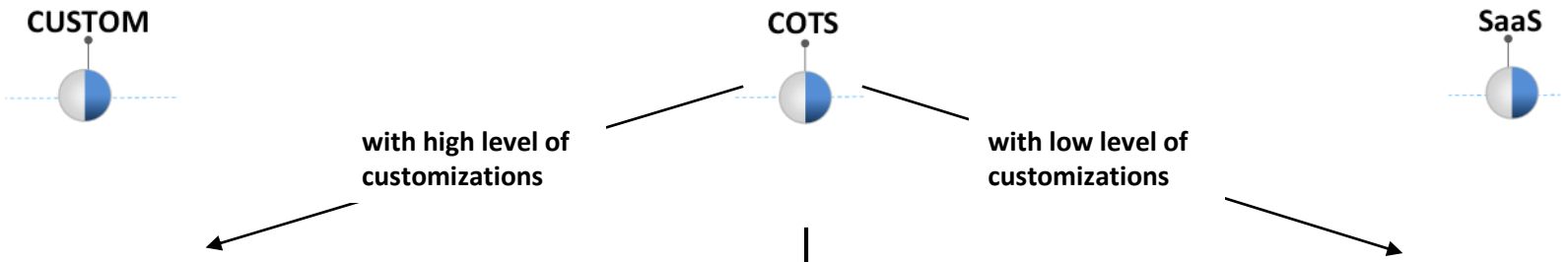
None of the implementation methods is perfect and fits 100% to the needs

SOLUTION FIT



	CUSTOM	COTS	SaaS
Ability to meet end-users' requirements	• **All requirements** can be met. • The return on experience of e-GP solutions that have been implemented in African countries shows the **difficulty of writing details functional specifications early in the development process. Resource and technical constraints** lead to situations were **not all requirements are met.**	• **Fulfills most needs** through inspiration from best practices elsewhere • Very specific processes can be **hard to translate** into the solution	
Easiness of use	• **Difficult to compete** with SaaS and COTS solutions • **Hard to mobilize all the expertise** required (User interface, User experience engineers)	• **Real face for a better "User Experience"**	

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All 3 modes allow the customer to have control over the administration of the tool in everyday life and ensure security

SOVEREIGNTY

	CUSTOM	COTS	SaaS
Data sovereignty and autonomy in the management :	• **On-site hosting** of the solution.	• **On-site hosting** of the solution.	• SaaS e-GP systems are **hosted in the cloud**. Most SaaS e-GP editors offer a **"single-tenant" architecture** that guarantees the total partitioning of data between clients.
Evolution of the system :	• Control of the system will be achieved by **perpetuating the teams that managed the project phase and change management.**	• Sovereignty involves a **transfer of know-how from the editor to the government teams**. It is also possible to ask editors to commit to delivering a feature that is not currently available.	• Sovereignty involves a **transfer of know-how from the editor to the government teams.** It is also possible to ask editors to commit to delivering a feature that is not currently available.

SECURITY

	CUSTOM	COTS	SaaS
Security of application and infrastructure:	**Choosing a SaaS/COTS application from a trusted software editor is more secure.**		
Security of data:	• Data security was frequently mentioned **as a central reason for choosing CUSTOM** projects by African governments.		• **SaaS editors are now able to provide a level of security at least equal to that of "on premise" hosting.**

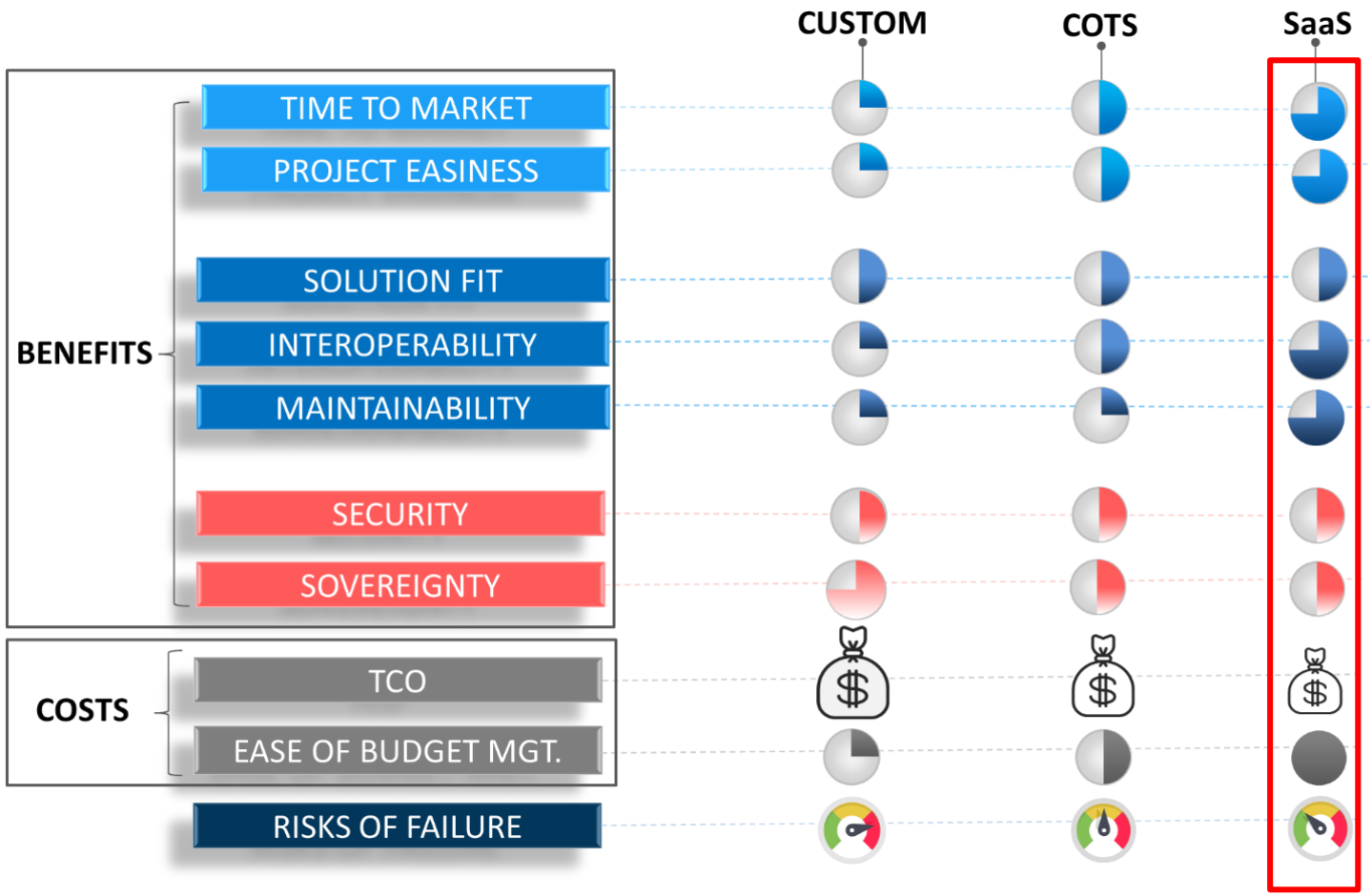
SaaS solution has the lowest risk of failure

RISK OF FAILURE

	Purchasing Process Risk		Risk of Budget and Schedule Slippage		Risk of Dependency		Risk of Obsolescence	
	Criticality	Commentary	Criticality	Commentary	Criticality	Commentary	Criticality	Commentary
CUSTOM	++	Difficult to evaluate the ability to produce the desired application	+++	A high proportion of specific projects induce an **important risk of budget and schedule slippage**	+++	**Higher than elsewhere**	++	**Difficult to follow the evolution of IT frameworks, languages, and components…**
COTS	++	Risk to conduct an **insufficiently detailed study of the capabilities of the market's solutions + to choose a solution far from the priority**	+++	A high proportion of specific projects induce an **important risk of budget and schedule slippage**	+	Risk of dependence on the editor. However **the risk is manageable**	+	**COTS is confortable because upgrades of the application is a condition of long-term survival for the sofware editor.**
SaaS	++	Risk to conduct an **insufficiently detailed study of the capabilities of the market's solutions + to choose a solution far from the priority**	+	Risk of budget and schedule slippage is **moderated.**	+	Risk of dependence on the editor. However **the risk is manageable**	+	**COTS is confortable because upgrades of the application is a condition of long-term survival for the sofware editor.**

Criticality : + : Low to moderate risk / ++ : Important risk / +++ : Very important risk

Cost-benefit ratio



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Thank you!

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