

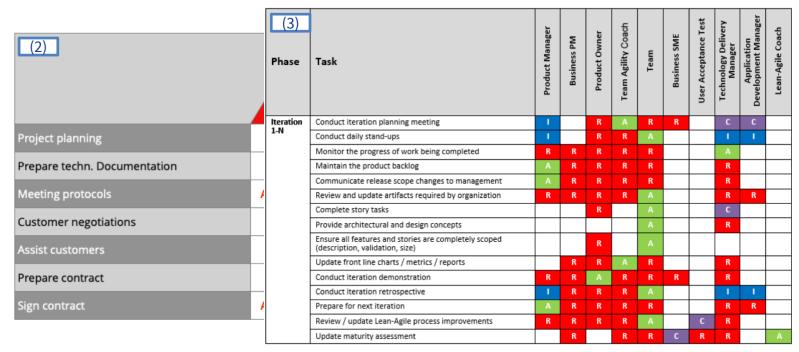
# Project phases: PLAN Organization: RACI

**Responsible**: In charge of doing the work

Accountable: Authority, takes decision, ultimately responsible

Consulted · Consulted before decision, SMEs

Informed: Informed after decision



Process: Method & Quality



- Process is here to ensure
  - → You are doing the **right** project, through "Project Portfolio Management" practice and Gating process
  - → You are doing the projects **right**, through Method & Quality guidelines and standards, to deliver projects OTOBOS, while complying with expectations in terms of architecture, procurement, security, risk management, resilience, financial management, data privacy ...
- Application of process will be controlled all along the project



Management System: Governance

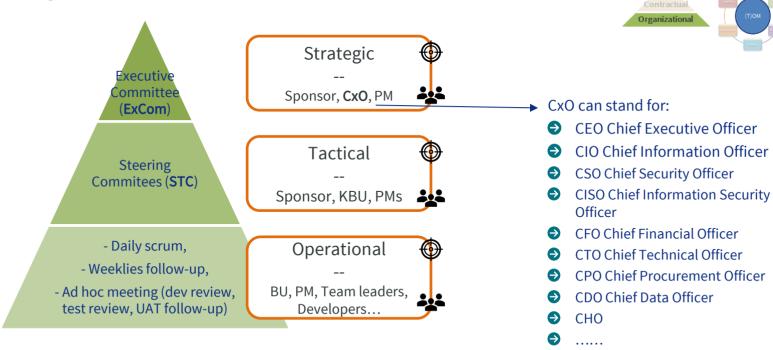


#### **DEFINITION**

"The system by which entities are directed and controlled. It is concerned with structure and processes for decision making, accountability, control and behavior at the top of an entity. Governance influences how an organization's objectives are set and achieved, how risk is monitored and addressed and how performance is optimized".<sup>(4)</sup>

Internal

#### Management System: Governance



Management System: Governance

# Terms of Reference / Steering Committee





Frequency	Duration	Quorum	Votir	ng rules	Reports to
Monthly	2h30 - 3h30	Half+Project Sponsor	<b>Decision from Project's Sponsor</b> Expectation that most decisions will be made based on a consensus		ExCom
Chair	Secretary	Members – IT imp	lementation team	Members – Bu	siness representatives
Project's Sponsor, Company's COO	Company's COO Executive Assistant	<ul><li>Program Manager</li><li>IT Project Manager</li><li>Other attendees if rel</li></ul>		Company's COO     Business Project Mana     Stream Key Business U	_
		Rolean	d responsibilities		
OF MANAGEMENT BO Committee will: Collect relat ORGANISATI Coordinate t across the [N	DY OR BOARD]. In order to acc ed information from any busir ION] as required; the necessary components of to IAME OF ORGANISATION] end [NAME of ORGANISATION	he project plans from all units	<ul> <li>Create ad hoc comn</li> <li>Review, coordinate</li> <li>Provide an annual reactivities.</li> </ul>	nittees to address strategic ICT is and arbitrate major ICT activities	s across the [NAME OF ORGANISATION]. FBODY OR BOARD] that details ICT

#### Suppliers. Information system, Location



#### **Suppliers**

Following the RFI, identify the suppliers to whom address an RFP for supporting the delivery of the project

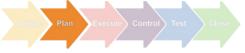
- Service providers
  - Expertise through SMEs (specialist Lawver, trainers..)
  - T&M. FP
  - Could be internal providers (IT services..)
- Manufacturers
  - Goods (computers chips, steel. raw materials...)
- Hiring equipment
  - Tools (cement mixer. premises...)



#### Location

Where the work has to be done

- Location is obvious for Civil Engineering projects
- For Manufacturing projects, depends on several constraints:
  - Costs optimization (manufacturing costs, transportation costs....)
  - Legal requirements to address specific markets (China...)
  - Strategic, geopolitical reasons
- For Management projects
  - Depending on the sourcing strategy and resources availability







#### **Information System**

All the means to ensure the work can he done

- Workplace, digital workplace
- Network
- Premises
- Security

# .2.2

# **Engaging a project – Costs estimations**

Operational pillar: Costing, pricing, margin

Basic financial notions embedded in projects

1. Gross Profit = Revenue - Cost of Goods Sold





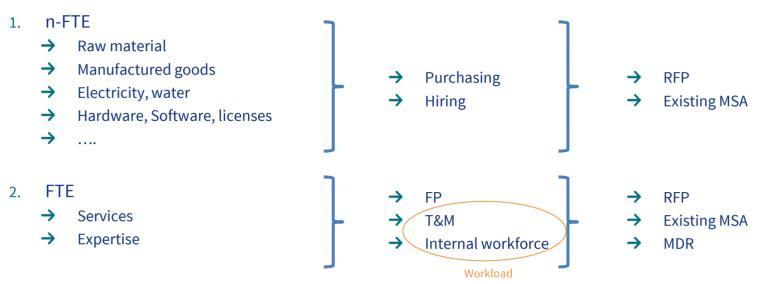




#### Operational pillar: Project budget estimation

# Contractual Organizational

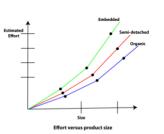
#### Cost estimation is based on 2 notions:



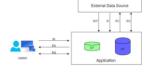
#### Operational pillar: Different workload estimation methodologies

	•	
Method	Description	Туре
COCOMO Constructive COst MOdel	Regression method based on the number of Lines Of Code. Analysis based on the REX of 63 different project (2k – 100k LOC). Useful when HLD is done to have an idea of the #LOC.	Statistical
Function points	Function points measure the size of an application system based on the functional view of the system. The size is determined by counting the number of inputs, outputs, queries, internal and external files in the system.	Functional analysis
<u>Delphi</u>	The process of the Delphi method involves asking multiple rounds of questions to the target group of experts. They do so until they arrive at a common consensus.	Expertise, Analogy
Proportional repartition	Ratios per projects activities are applied on development and unitary tests estimations.	Abacus





Organizational

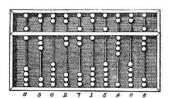




Operational pillar: Workload & Costs estimation by Abacus







Workload = Unitary estimations \* Activity ratios + Contingency

Parkinson's Law: « Work expands to fill the time available for its completion".

#### Operational pillar: Workload & Costs estimation by Abacus





Creation							
Unités d'œuvre	Charge	pour une UO (e	en jours)	Nomb	re d'UO par con	nplexité	TOTAL
	Simple	Moyen	Complexe	Simple	Moyen	Complexe	
Interfaces entrantes	4.00	6.00	8.00		4.00	1.00	32.00
Interfaces sortantes	2.50	4.00	7.00	3.00	4.00	3.00	44.50
Formulaires	1.00	2.00	3.00		6.00		12.00
Programmes de formulaires	2.50	3.50	4.50		6.00		21.00
Tables Spécifiques, vues,							
Matchcodes	0.25	0.33	0.50				0.00
Reportings et programmes	1.50	3.50	7.00	4.00	25.00	7.00	142.50
Batch input	2.50	3.50	6.00				0.00
Querys	2.00	3.50	5.00				0.00
TOTAL	13.50	160.50	78.00	7.00	45.00	11.00	252.00

Crástian

Unités d'œuvre	tés d'œuvre Charge pour une UO (en jours)			Nomb	TOTAL		
	Simple	Moyen	Complexe	Simple	Moyen	Complexe	
Interfaces entrantes	1.00	1.50	2.00	6.00	4.00	1.00	14.00
Interfaces sortantes	0.50	1.00	1.50	16.00			8.00
Formulaires	1.00	1.50	2.00				0.00
Programmes de formulaires	0.50	1.00	2.00				0.00
Tables Spécifiques, vues,							
Matchcodes	0.25	0.33	0.50				0.00
Reportings et programmes	0.75	1.25	2.00		30.00		37.50
Batch input	0.50	1.00	1.50				0.00
Querys	0.25	0.33	0.50				0.00
TOTAL	14.00	43.50	2.00	22.00	34.00	1.00	59.50

Total Unitary workload

311.50 md

#### Operational pillar: Workload & Costs estimation by Abacus



Applicable ratio can depend on the project nature and complexity

→ Business project

Business Project Activities	Ratios
Framing	8%
High Level Design HLD	10%
Low Level Design LLD	25%
Development + UT	100%
Integration	30%
Project Management	20%
End-to-end Testing	15%
UAT	7%
Warranty	5%
Contingency	15%
TOTAL	235%

→ Technical upgrade project

Technical Project Activities	Ratios
Framing	3%
High Level Design HLD	
Low Level Design LLD	30%
Development + UT	100%
Integration	30%
Project Management	15%
End-to-end Testing	15%
UAT	
Warranty	
Contingency	8%
TOTAL	201%

## Operational pillar: Workload & Costs estimation by Abacus





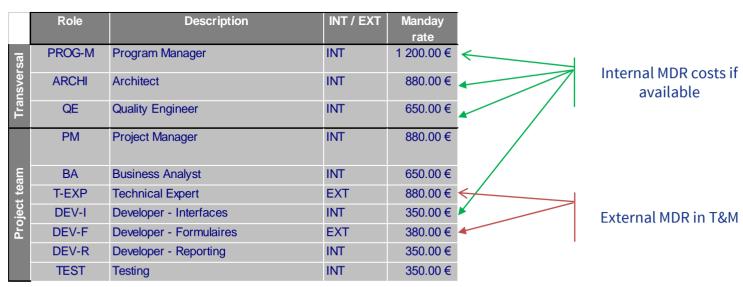
				Project Abacus	
Applicable			> Ratio/Dev	Simulation	Project
ratios		Framing	8%	24.92	3%
		High Level Design HLD	10%	31.15	4%
		Low Level Design LLD	25%	77.88	11%
		Development + UT	100%	→ 311.50	43%
		Integration	30%	93.45	13%
		Project Management	20%	62.30	9%
	-	End-to-end Testing	15%	46.73	6%
Dev +UT		UAT	7%	21.81	3%
workload		Warranty	5%	15.58	2%
	•	Contingency	15%	46.73	6%
		TOTAL	235.00%	732.03	

Total project workload

#### Operational pillar: Workload & Costs estimation by Abacus







## Operational pillar: Workload & Costs estimation by Abacus



•														Organizational
A	ctivity re	partition	MDR ==>	1200	880	650	880	650	880	350	380	350	350	
		Activity type	Mix MDR	PROG-M	ARCHI	QE	PM	BA	T-EXP	DEV-I	DEV-F	DEV-R	TEST	Total
FRA	Framing		736.0 €	1%	20%	3%	5%	61%	10%					100%
HLD	High Level Design		582.0 €	1%	10%	3%	5%	44%		10%	10%	10%	7%	100%
LLD	Low Level Des	sign	573.5€	1%		3%	10%	50%		10%	10%	10%	6%	100%
DEV-	I	Interfaces	494.7 €	1%	2%	3%	12%		10%	67%			5%	100%
DEV-	F Development	Formulaires	514.8€	1%	2%	3%	12%		10%		67%		5%	100%
DEV-	R	Reporting	494.7 €	1%	2%	3%	12%		10%			67%	5%	100%
INT	Integration		489.9€	1%		3%	5%	12%	10%	23%	23%	23%		100%
INT	Project Manag	gement	960.0 €	25%			75%							100%
E2E	End-to-End Te	esting	486.2€	1%		3%	6%	11%	10%	3%	3%	3%	60%	100%
UAT	UAT		484.0 €	1%		3%	2%	35%		3%	3%	3%	50%	100%
WAR	Warranty		417.5€	1%			2%	5%	5%	23%	23%	23%	18%	100%
WAR	Contingency		657.0 €	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	100%
		Total	562 8 €	26.5	10.0	22.0	107.6	07.3	52.1	109.7	6/ 9	162.2	68.8	732.0

		Project Abacus		
	Ratio/Dev	Simulation	Project	
Framing	8%	24.92	3%	1
High Level Design HLD	10%	31.15	4%	
Low Level Design LLD	25%	77.88	11%	
Development + UT	100%	311.50	43%	
Integration	30%	93.45	13%	
Project Management	20%	62.30	9%	
End-to-end Testing	15%	46.73	6%	
UAT	7%	21.81	3%	
Warranty	5%	15.58	2%	
Contingency	15%	46.73	6%	
TOTAL	235.00%	732.03		vier ESNAULT 2024

Workload spread by profile

Internal

#### Operational pillar: Workload & Costs estimation by Abacus



#### ◆ Project <u>COSTS</u> summary

		Activity type	Mix MDR	MD	Ratio	Costs
FRA	Framing		736.0 €	24.9	3%	18 341 €
HLD	High Level De	sign	582.0 €	31.2	4%	18 129 €
LLD	Low Level Des	sign	573.5 €	77.9	11%	44 661 €
DEV-I		Interfaces	494.7 €	98.5		
DEV-F	Development	Formulaires	514.8 €	33.0	43%	154 762 €
DEV-R		Reporting	494.7 €	180.0		
INT	Integration		489.9 €	93.5	13%	45 781 €
INT	Project Manag	gement	960.0 €	62.3	9%	59 808 €
E2E	End-to-End Te	esting	486.2 €	46.7	6%	22 718 €
UAT	UAT		484.0 €	21.8	3%	10 554 €
WAR	Warranty		417.5 €	15.6	2%	6 503 €
WAR	Contingency		657.0 €	46.7	6%	30 698 €
		Total	562.8 €	732.0	100%	411 955 €



#### Operational pillar: Workload & Costs estimation by Abacus

#### Summary

- 1. Unitary workload with Abacus DEV + UT
- 2. Type of project to define the ratios
- 3. Apply abacus to evaluate global workload
- 4. Identification of cost per profile
- 5. Standard activity repartition per profile
- 6. Cost summary





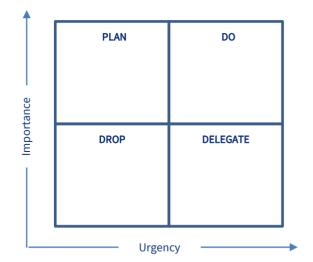
#### Organizational tips & tricks: The EISENHOWER MATRIX



1 Categorize the tasks of you to do list

**IMPORTANT IMPORTANT URGENT NOT URGENT** Importance **NOT IMPORTANT NOT IMPORTANT NOT URGENT URGENT** Urgency

2 Prioritize your work



# French correspondance of covered concepts

#### #4.2 Engaging a project

Concept	French correspondance / usage
KBU: Key Business Users	<ol> <li>Utilisateurs principaux</li> <li>Utilisateurs clés</li> </ol>
BU: Business User	Utilisateur (métier)
SME: Subject Matter Expert	Experts (généralement Experts Métiers)
CxO CISO: Chief Information Security Officer CEO: Chief Executive Officer CFO: Chief Financial Officer	Directeurs RSSI: Responsable Sécurité des Systèmes d'Information Directeur Général DAF: Directeur Administratif et Financier
TOR: Terms of Reference	TOR

# .2.3

# **Engaging a project - Planification**

Operational pillar: Planification





"Failing to plan is planning to fail"



Operational pillar: Planification

• 6 steps to plan your project



- Determine the Work
  Breakdown Structure (WBS)
- 2 Identify and allocate the resources
- 3 Setup capacity planning

- Organize tasks and dependencies with PERT
- Determine the critical path of the project
- 6 Create GANTT planning

Operational pillar: Planification – WBS 1



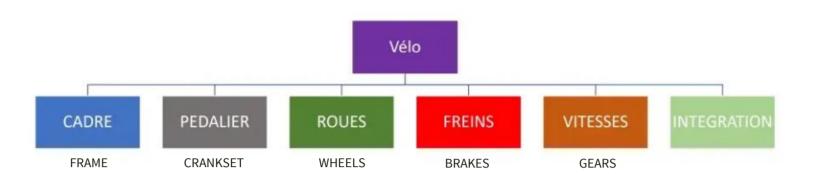




Operational pillar: Planification - WBS 1



- First step of WBS is Product Breakdown Structure definition
- This analysis led to 6 deliverables, o.w. 5 "sub-products"

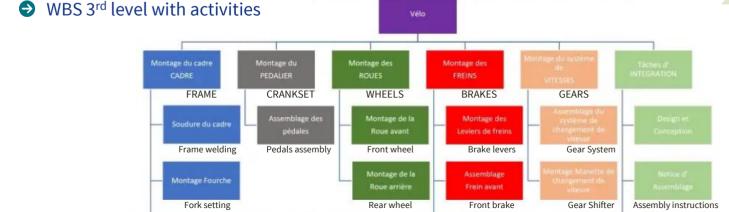


Operational pillar: Planification - WBS 1



Bench and road tests





Montage Guidon

Montage Selle

Saddle setting

Handlebar setting

Assemblage

Frein arrière

Rear brake

Operational pillar : Planification - WBS 1



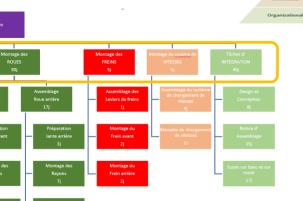


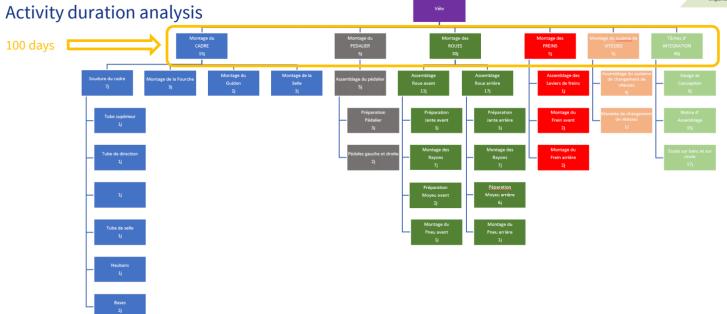
WBS 4<sup>th</sup> level with detailed activities



Operational pillar: Planification - WBS 1







## Operational pillar: Planification – Resource allocation 2

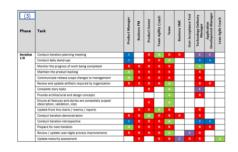




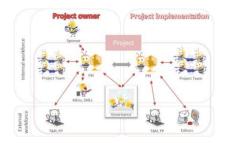


	Time & Material	Fixed Price		
Description	Capacity based	Results oriented		
l buy	People and Expertise	A project team		
l pay	Number of Mandays per Manday Rate	A lumpsum		
l manage	People, activities, budget, perimeter, risks	A contract and relationship with a Provider		
My advantages	Flexibility on the project scope, design-to-cost	Commitment on scope, planning, budget		
My disadvantages	Heavy involvement, no guaranty to deliver OTOBOS	Rigid format, long preparation time tricky negotiations for amendment		









Operational pillar: Planification – Capacity planning 3



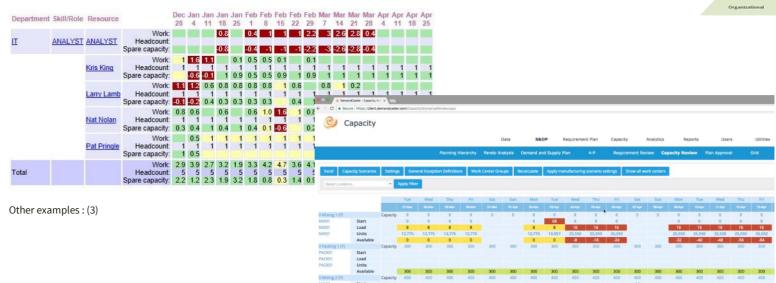




#### Operational pillar: Planification – Capacity planning 3







D Cut an PACK02 PACK02 PACK02 Operational pillar : Planification – PERT 4

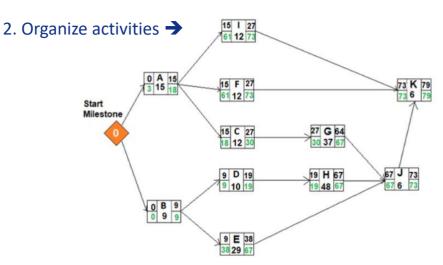
PERT Method (Program Evaluation and Review Technique) was first developed by the US Navy SPO (Special Projects Office) in 1967 during the Polaris missile development program then it was applied to the other industries<sup>(4)</sup>.

- ◆ Example of a power plant Project
  - 1. Create dependencies →

Activity	Description	Predecessors	Optimistic Duration (To)	Pessimistic Duration (Tp)	Most likely Duration (Tm)	Expected Duration (To + 4Tm + Tp)/6
0	Start Milestone	-	0	0	0	0
Α	Select Technical Staff	0	12	18	15	15
В	Site Survey	0	6	12	9	9
С	Select Equipments	Α	9	15	12	12
D	Prepare Designs	В	6	18	9	10
E	Bring Utilities to the Site.	В	18	36	30	29
F	Interview Applicants and Fill Positions	A	9	15	12	12
G	Purchase the Equipment.	С	36	42	36	37
Н	Construct the Power Plant	D	42	54	48	48
I	Develop an Information System.	Α	6	18	12	12
J	Install the Equipment.	H,G,E	3	9	6	6
K	Train the Staff to Run the System	F,J,I	3	9	6	6

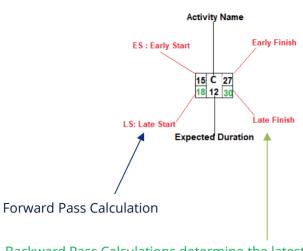
Operational pillar: Planification – PERT 4

PERT visual view







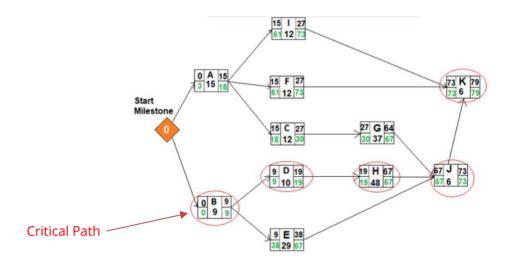


Backward Pass Calculations determine the latest dates by which each activity can be performed without increasing the project's minimum duration.

Operational pillar: Planification – Critical path 5



The critical path is the longest path in the network diagram with no contingency



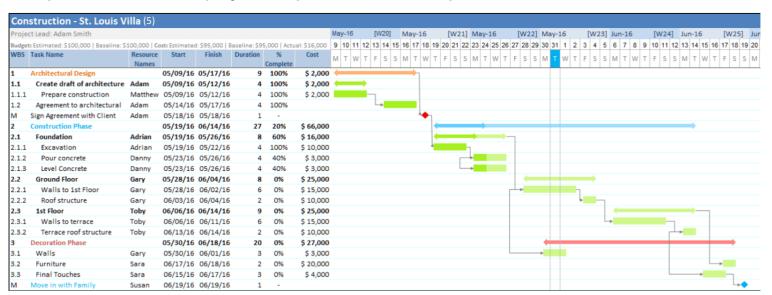


Operational pillar: Planification – GANTT 6





Synthetic view of the project, easy to follow on a daily basis



#### Operational pillar: Break....

- Break







# .2.4

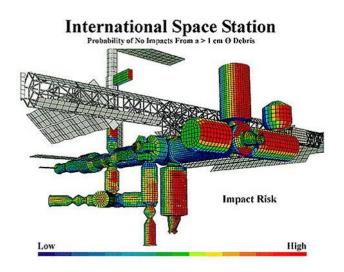
## **Engaging a project - Risks**

Operational pillar: Project risks assessment



Risks (defined in ISO 31000 as the effect of uncertainty on objectives)

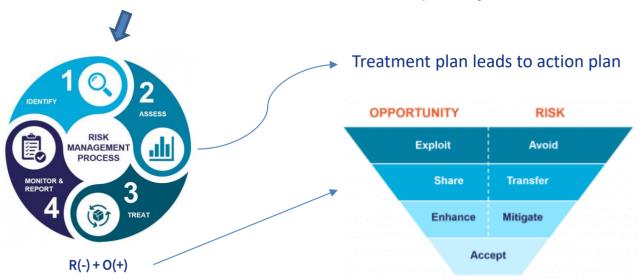




Operational pillar: Project risks assessment



Risks (defined in ISO 31000 as the effect of uncertainty on objectives)



Operational pillar: Project risks assessment

Criticality assessment

Criticality = (P)robability \* (I)mpact



#### RISK ASSESSMENT







#### EXTREME RISK



A person wearing protective devices enters into the cage and is feeding the lion Possibility: 4 Severity: 5 Possibility X Severity: = 20

#### MODERATTE RISK



A person is feeding the lion through a specially desinged feed opening Possibility: 3 Severity: 5
Possibility X Severity = 15

TOLERABLE RISK



A person is feeding the lion in a specially desinged feeding cage

Possibility: 1

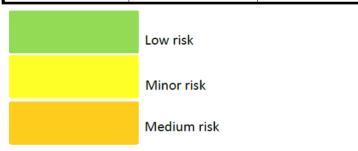
Severity: 1

Possibility X Severity = 1

MINIMUM RISK

Operational pillar: Risk rating matrix







#### Operational pillar: Severity Assessment Table

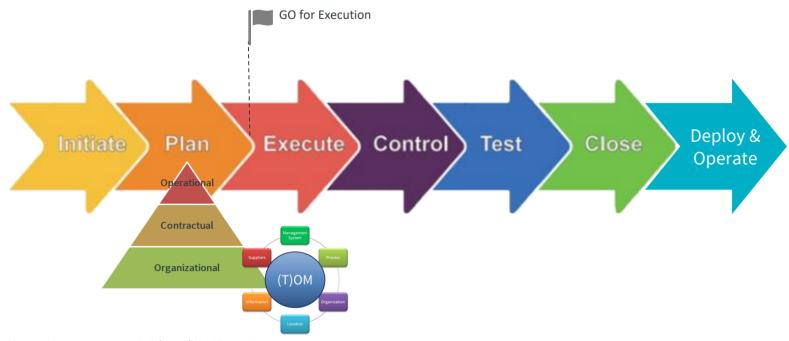




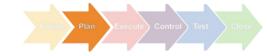
	ational	

			_			
		Extremely serious	Very serious	Serious	Minor	Not Significant
Financial impact (P&L, revenues)	Finance Audit	>= 500 M€ Group Operational risk appetite Limit level	>= <b>300 M€</b> Group Operational risk appetite Alert level	<b>30 M€</b> Group Audit most severe threshold	>=1 M€	Less than 1 M€
Reputational impact	Communication Marketing	International media coverage Complete loss of trust Irrecoverable reputation	National to international media coverage Trust never fully recoverable Serious and lasting impact on reputation	Local to national media coverage Trust diminished Impact on reputation btw. 1 & 3 months	Local complaint / trade magazine Minimal change in stakeholders' trust Impact on reputation less than a month	Minor local complaint No change in stakeholders' trust No impact on reputation
Legal impact	Legal	Litigation above 500M€ (annually)	Litigations between 250M€ and 500M€ (annually)	Litigations between 100M€ and 250M€ (annually)	Litigations between 10M€ and 100M€ (annually)	Litigations below 10M€ (annually)
Regulatory impact	Compliance	Exemplary sanctions	Very relevant sanctions	Significant sanctions	Regulation breached	No regulatory impact
Sales impact	Distribution Sales	1 year delay In XXXX Strategic Plan yearly objective on 1 business line (Life / P&C)	9 months delay In XXXX Strategic Plan yearly objective on 1 business line (Life / P&C)	6 months delay In XXXX Strategic Plan yearly objective on 1 business line (Life / P&C)	3 months delay In XXXX Strategic Plan yearly objective on 1 business line (Life / P&C)	Less than 3 months delay In XXXX Strategic Plan yearly objective on 1 business line (Life / P&C)
Operating impact	Operations	More than 100% additional backlog above tolerance level (monthly)	Between 50% and 100% additional backlog above tolerance level (monthly)	Between 10% and 50% additional backlog above tolerance level (monthly)	Between 5% and 10% additional backlog above tolerance level (monthly)	Backlog at tolerance level (monthly)
Productivity impact	Human resources	Loss of more than 50% of staff (annually)	Loss of 25% to 50% of staff (annually)	Loss of 15 % to 25% of staff (annually)	Loss of 15% of staff (annually)	Loss of less than 15% of staff (annually)
Project impact (* reduction in scope relevant for waterfall projects only)	Project governance	AR Project write-off No achievement of key objectives	AR Project severe delay (more than 10%) Failure to achieve key objectives or reduction in scope (*)	AR Project significant delay (between 5%- 10%) Failure to achieve key objectives or reduction in scope (*)	AR Project limited delay (below 5%) Failure to achieve key objectives or reduction in scope (*)	AR Project no impact on timing
Data impact	Data Privacy	Personal data: Breach of confidentiality > 1M of individuals / dients impacted	Personal data: Breach of confidentiality > 300k of individuals / clients impacted	Personal data: Breach of confidentiality > 100k of individuals / dients impacted	Personal data: Breach of confidentiality > 1k of individuals / dients impacted	Personal data: Breach of confidentiality < 1k of individuals / dients impacted





Internal







MOT





**RFP** 





Project Budget



Project Management Principles - Olivier ESNAULT 2024

DELIVERY MODEL: Organizational pillar

DELIVERY MODEL: Contractual pillar

DELIVERY MODEL: Operational pillar

# **Appendix**

#### Table of Reference

#### #4.2 Engaging a project

- (1). Project planning for Beginners
- (2). WBS Projet, https://blog-gestion-de-projet.com/wbs-projet/
- (3). Resource Demand vs Capacity Innate Management (innate-management.com)
- (4). projectcubicle.com/pert-method-definition-examples/
- (5). ganttexcel.com/documentation/tasks/task-dependencies/

## French correspondance of covered concepts

#### #4.2 Engaging a project

Concept	French correspondance / usage
Framing HLD: High Level Design LLD: Low Level Design	Cadrage SFG : Spécifications Fonctionnelles Générales SFD : Spécifications Fonctionnelles Détaillées
Abacus	Abaques