



nec

Implementation of a Project Management System

Maarten Debucquoy

Outline

- Why for heaven's sake Project Management?
- What the beep is a Project Management System?
- Implementation of Project Management Processes and System at imec
 - Initialization
 - Staged approach
 - Execution
 - Allocate resources
 - Follow-up and escalate on status, risks and issues

Why for heaven's sake Project Management?

Lever imec's complex research environment

Complex research challenges requiring
multiple expert teams:

- **Fundamental science:** physics, chemistry, biology...
- **Process knowledge:** deposition, etching...
- **Device integration:** patterning, back-end metallization, packaging...
 - **System design:** component interconnection, read-out, software,...
 - ...



Enable insights in skills & capacity



Enable collaborating teams

Lever imec's complex research environment

Project requests coming from multiple directions:

- **Public funded projects** with a consortium responding on calls from EU, national, regional,... government
- **Research-on-Demand** project on request of a commercial partner
- **Affiliation program** grouping multiple commercial partners on a large research challenge
- **Low volume manufacturing** for a commercial partner
 - ...



Enable insights in skills & capacity



Enable collaborating teams



Standardize our approach to projects



Capture project knowledge

Lever imec's complex research environment

Every project meets challenges on scope, budget or schedule:

- Not all specs of a **milestone** are obtained
- Partner requests **additional tasks** during the project
- Same **expert or tool** is requested by multiple projects at the same time
 - ...



Enable insights in skills & capacity



Enable collaborating teams



Standardize our approach to projects

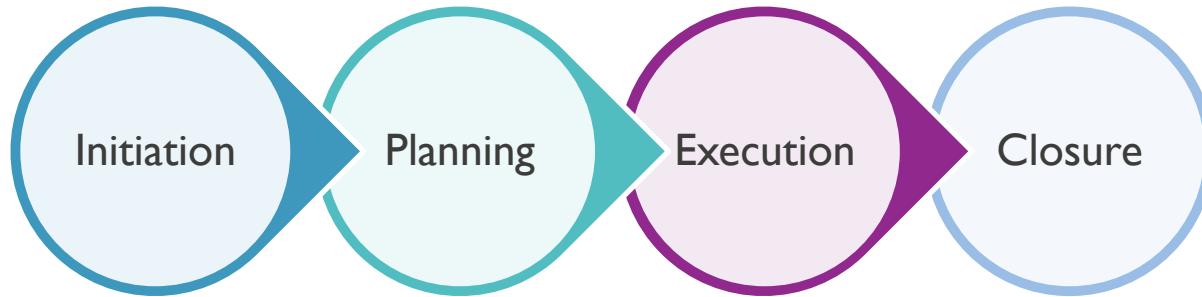


Capture project knowledge



Enable R&D project decisions

Define Project Management Processes over project life cycle



- Project Management Processes involve

- Logical flows
- Stages/gates with check lists
- Roles with responsibilities
 - Project manager
 - Program and portfolio manager
 - Project management office
- Develop best practices, methodologies, standards
- Train and coach project managers
- Monitor compliance with standards
- Coordinate communication between projects

What the beep is a Project Management System?

One software platform for all project management data

Gantt-charts, tasks and milestones



Planned and actual used resources



Projects in initiation and projects in execution



Status, risks and issues



Reports and communications to stakeholders



Check-list, stages and gates, decisions taken



Replaced or integrated



clarity

- Home
- Projects**
- Project Tiles
- Ideas
- Investments
- Pages
- Custom Objects
- Status Reports
- Tasks
- To Dos
- Hierarchies
- Agreements
- Staffing
- Teams
- Resources
- Timesheets
- Clarity Release

Projects

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View

I&C - PtM & Storage - Project list

[Select all](#) [Deselect all](#)[Group By](#)

Project ID *	Project Name *	Project Manager	Stage	Involved org. units	Project status	IMEC Project Type
<input type="checkbox"/> P02697	Project A	Stevie Wonder	1. Project opportunity r...	BECHEM ; IC ; LEAN		EXT: Research on Demand
<input type="checkbox"/> P01485			3. Project opportunity d...	BECHEM ; IC ; LEAN...		EXT: Development on De...
<input type="checkbox"/> P01486			3. Project opportunity d...	BECHEM ; IC ; LEAN...		EXT: Development on De...
<input type="checkbox"/> P01821			3. Project opportunity d...	BECHEM ; IC ; LEAN		EXT: Public Funded
<input type="checkbox"/> P01823			3. Project opportunity d...	BECHEM ; IC ; LEAN		EXT: Public Funded
<input type="checkbox"/> P02156			3. Project opportunity d...	ALABS ; BECHEM ; I...		EXT: Public Funded
<input type="checkbox"/> P02698			3. Project opportunity d...	BECHEM ; IC ; LEAN		EXT: Public Funded
<input type="checkbox"/> P00818			4. Project approval pen...	BECHEM ; IC ; LEAN...		EXT: Public Funded
<input type="checkbox"/> P00811			4. Project approval pen...	IC ; LEAN		EXT: Public Funded
<input type="checkbox"/> P00846			4. Project approval pen...	BECHEM ; IC ; LEAN		EXT: Public Funded
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<input type="checkbox"/> P02111			4. Project approval pen...	BECHEM ; IC ; LEAN		EXT: Public Funded
<input type="checkbox"/> P00752			5. Project planning	D2TECT ; STP ; TIP		EXT: Private
<input type="checkbox"/> P00479			6. Project execution	DSRD ; HSA	Green	EXT: Public Funded
<input type="checkbox"/> P00609			6. Project execution	BECHEM ; IC ; LEAN	Green	EXT: Public Funded
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<input type="checkbox"/> P00611			6. Project execution	BECHEM ; IC ; LEAN	Green	EXT: Research on Demand
<input type="checkbox"/> P00612			6. Project execution	BECHEM ; IC ; LEAN	Green	EXT: Public Funded

Columns

Details

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[Collapse all](#) [Actions](#)

> Project Master Data

> Project Lifecycle

> SAP

> Stakeholders

Project Manager *	Sponsor	Technical Lead
Account Manager	Business controller	Technical Lead(s)
Back-up Project Manager	PMO	Finance project officer
		Business Development Manager

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Hierarchy > Industry and Consumer/Power & Energy/...

P00611 Green

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Actions New Task

View (Copy) Simple view Save

Search... Filter

Row #: Name * Task Owner Milest... Progress Start * Finish * Baseline S... Baseline F... Critical Duration % Com... ETC Includ... Linked financial WBS element Assigned

Apr 24 May 24 Jun 24 Jul 24 Aug 24 Sep 24 Oct

WPI

Row #:	Name *	Task Owner	Milest...	Progress	Start *	Finish *	Baseline S...	Baseline F...	Critical	Duration	% Com...	ETC	Includ...	Linked financial WBS element	Assigned	Apr 24	May 24	Jun 24	Jul 24	Aug 24	Sep 24	Oct
1	Project	Started			1 May 2024	30 Jun 2025	1 May 2024	30 Apr 2025		252	0%	436										
2	WPO - Project management	Started			1 May 2024	30 Jun 2025	1 May 2024	30 Apr 2025		252	0%	24										
3	WPO - Resources	Started			1 May 2024	30 Jun 2025	1 May 2024	30 Apr 2025		252	0%	24										
4	MS0.0 - Kick-off meeting	Completed			1 May 2024	1 May 2024	1 May 2024	1 May 2024		0	0%	0	✓									
5	MS0.1 - Intermediate report	Completed			1 Jan 2025	1 Jan 2025	1 Jan 2025	1 Jan 2025		0	0%	0	✓									
6	MS0.2 - Final report	Started			30 Jun 2025	30 Jun 2025	30 Apr 2025	30 Apr 2025		0	0%	0	✓									
7		Started			1 May 2024	30 Jun 2025	1 May 2024	30 Apr 2025		252	0%	412										
8		Started			1 May 2024	30 Jun 2025	1 May 2024	30 Apr 2025		252	0%	412										
9		Started			1 May 2024	31 Oct 2024	1 May 2024	31 Oct 2024		132	0%	0										
10		Started			31 Oct 2024	31 Oct 2024	31 Oct 2024	31 Oct 2024		0	0%	0	✓									
11		Started			1 Aug 2024	28 Feb 2025	1 Aug 2024	28 Feb 2025		152	0%	0										
12		Started			28 Feb 2025	28 Feb 2025	28 Feb 2025	28 Feb 2025		0	0%	0	✓									
13		Started			1 Mar 2025	30 Apr 2025	1 Mar 2025	30 Apr 2025		43	0%	0										

WPO - Resources (T005401)

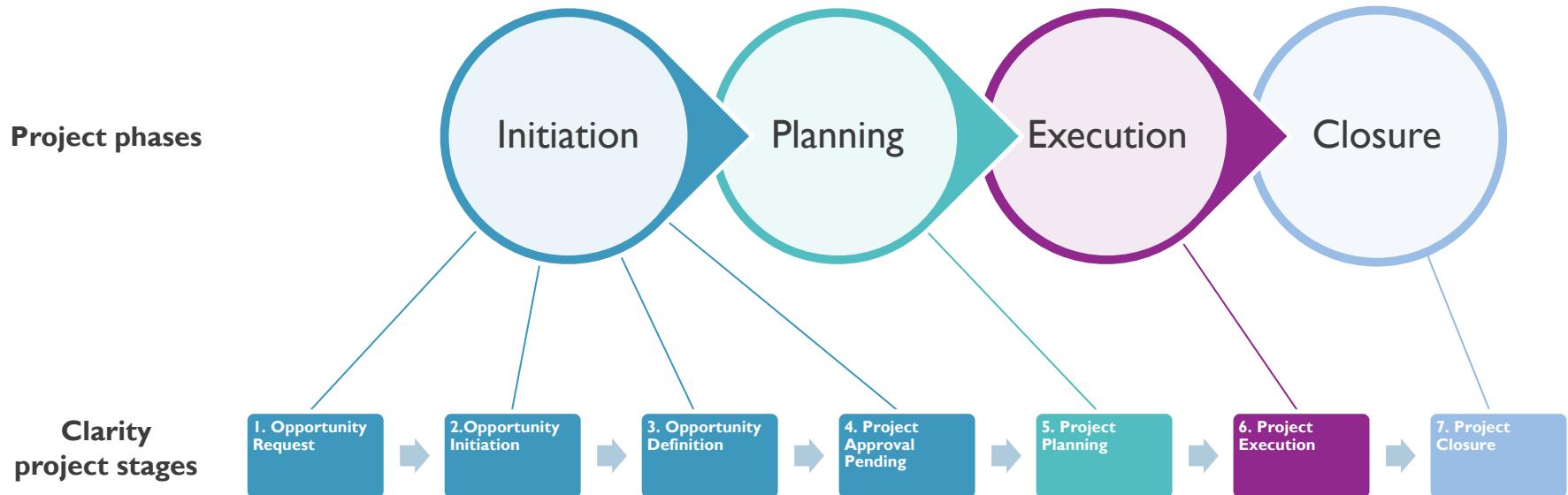
Details Conversations To Dos Assignments Dependencies

Group By

Resource * +	Requirement Name	Start *	Finish *	Grand Totals	2024-05	2024-06	2024-07	2024-08	2024-09	2024-10	2024-11	2024-12	2025-01	2025-02	2025-03	2025-04
				ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC	ETC
Total					24.0	1.9	1.6	1.9	1.8	1.7	1.9	1.7	1.8	1.9	1.6	1.7
-Project manager	Project manager	1 May 2024	30 Jun 2025		24.0	1.9	1.6	1.9	1.8	1.7	1.9	1.7	1.8	1.9	1.6	1.7

Implementation of Project Management Processes and Project Management System

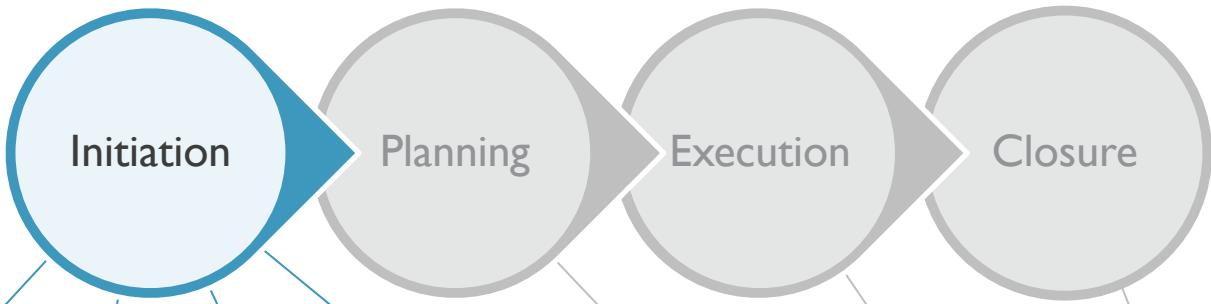
Project life cycle



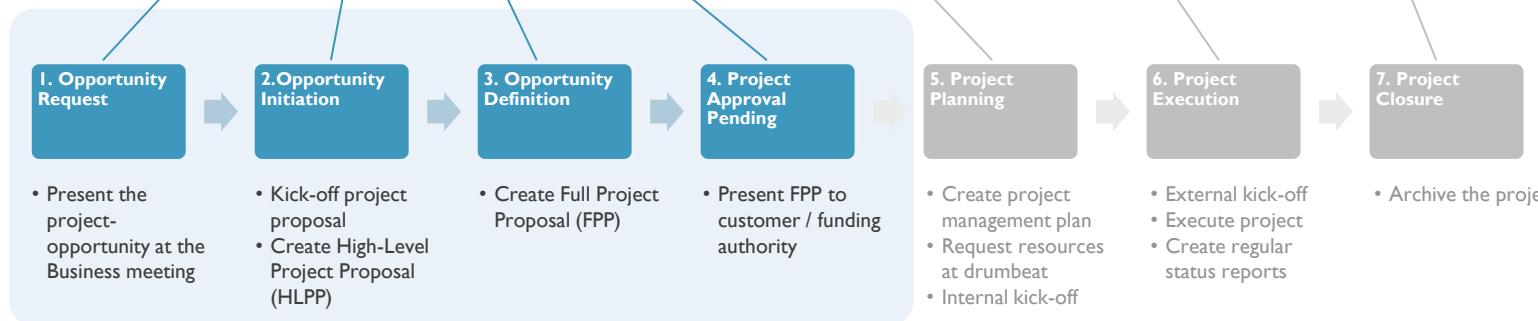
Project intake

Project life cycle

Project phases



Clarity project stages





Projects

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I&C - PtM & Storage - Project list

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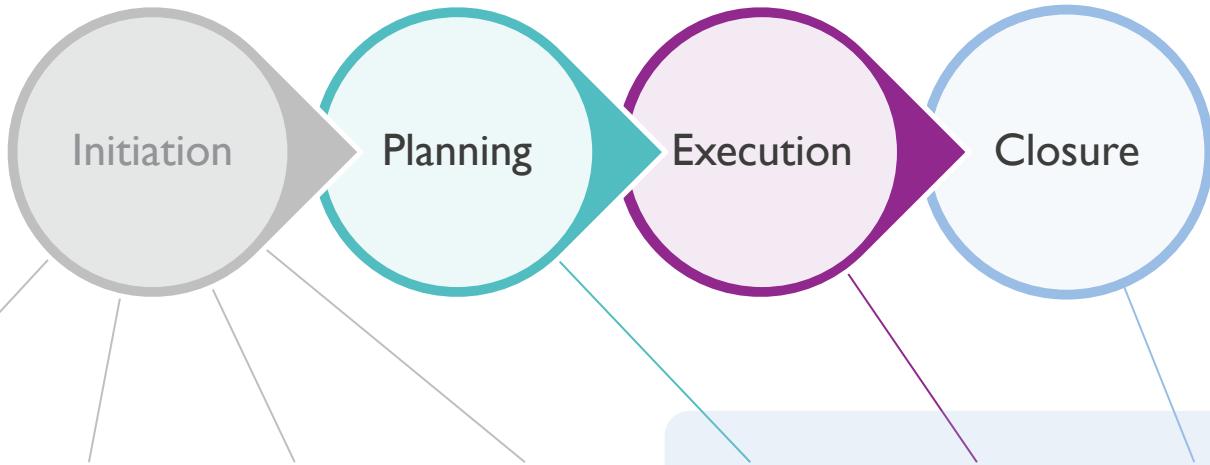
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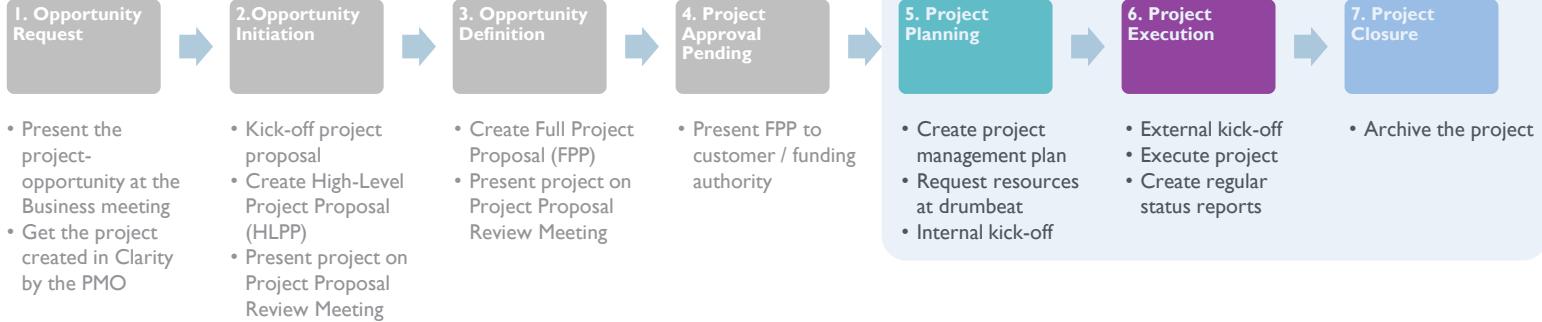
Project Execution

Project life cycle

Project phases



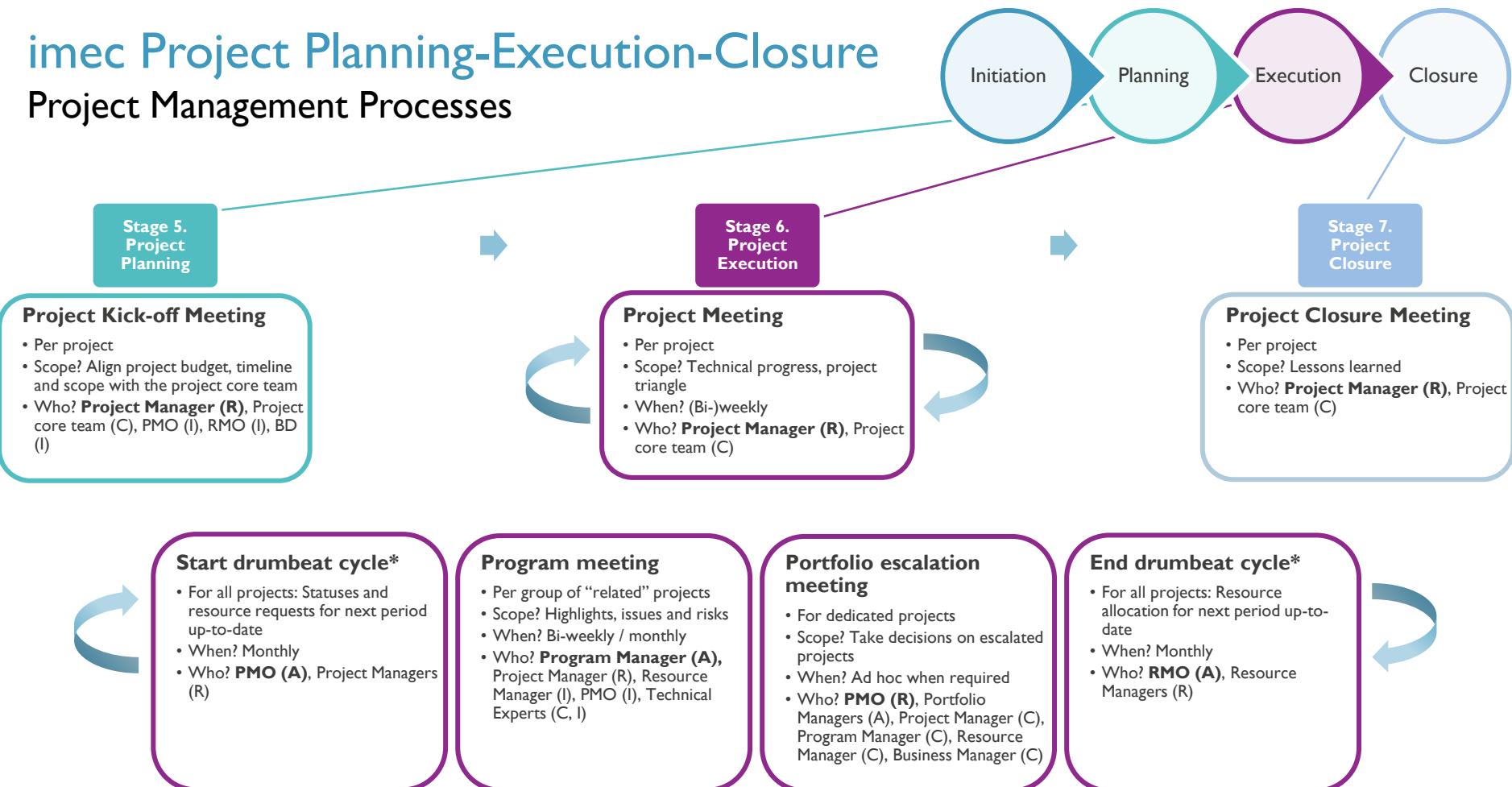
Clarity project stages



The drumbeat: resource management at imec

imec Project Planning-Execution-Closure

Project Management Processes



* Not a meeting but a call for action

** We define a program as a group of related projects.



Everybody



Somebody



Anybody



Nobody

There was an important job to be done and Everybody was sure that Somebody would do it.

Anybody could have done it, but Nobody did it.

Somebody got angry about that because it was Everybody's job.

Everybody thought that Anybody could do it, but Nobody realized that Everybody wouldn't do it.

It ended up that Everybody blamed Somebody when Nobody did what Anybody could have done.

- Charles R. Swindoll

3 levels of planning

Related but not (at) the same (time)

Strategic: Long-term, high-level decisions aligned with business goals.



Tactical: Mid-term, detailed scheduling and allocation of resources.

Monthly frequency and with a planning horizon of minimum **rolling 3 months**



Operational: Day-to-day management and execution of tasks.



Drumbeat cycle

Continuous workflow

Project manager:

- Bypass conflicts by planning changes (delay)
- Bypass conflicts by rescoping
- Ask for (de)prioritizing the project
- Escalate to PMO if no solution

Resource manager:

- Bypass conflicts by resource changes
- Ask for project (de)prioritizing
- Escalate to PMO if no solution
- Inform RMO for alternative approach and/or longer-term resource actions

PMO and RMO accountable

Resource manager:

- Allocate resources
- Identify conflicts
- Conflict dialog with PM

RMO accountable



Project manager:

- Close finished projects, open new projects

Resource manager:

- Update resource availability

PMO and RMO accountable

Project manager:

- Consult experts
- Make best-estimate of required resources

PMO accountable

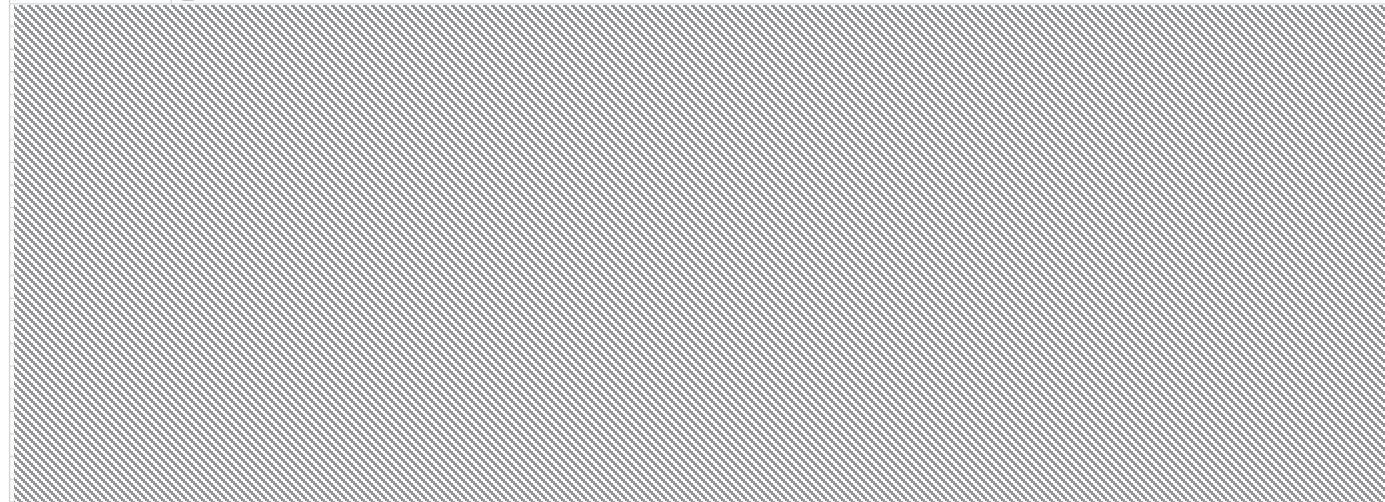
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Hierarchy ▶

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Group	Staffing	2025-06		2025-07		2025-08			
		Request	Allocation	Actuals	Request	Allocation	Actuals	Request	Allocation
	Staff OBS Unit								

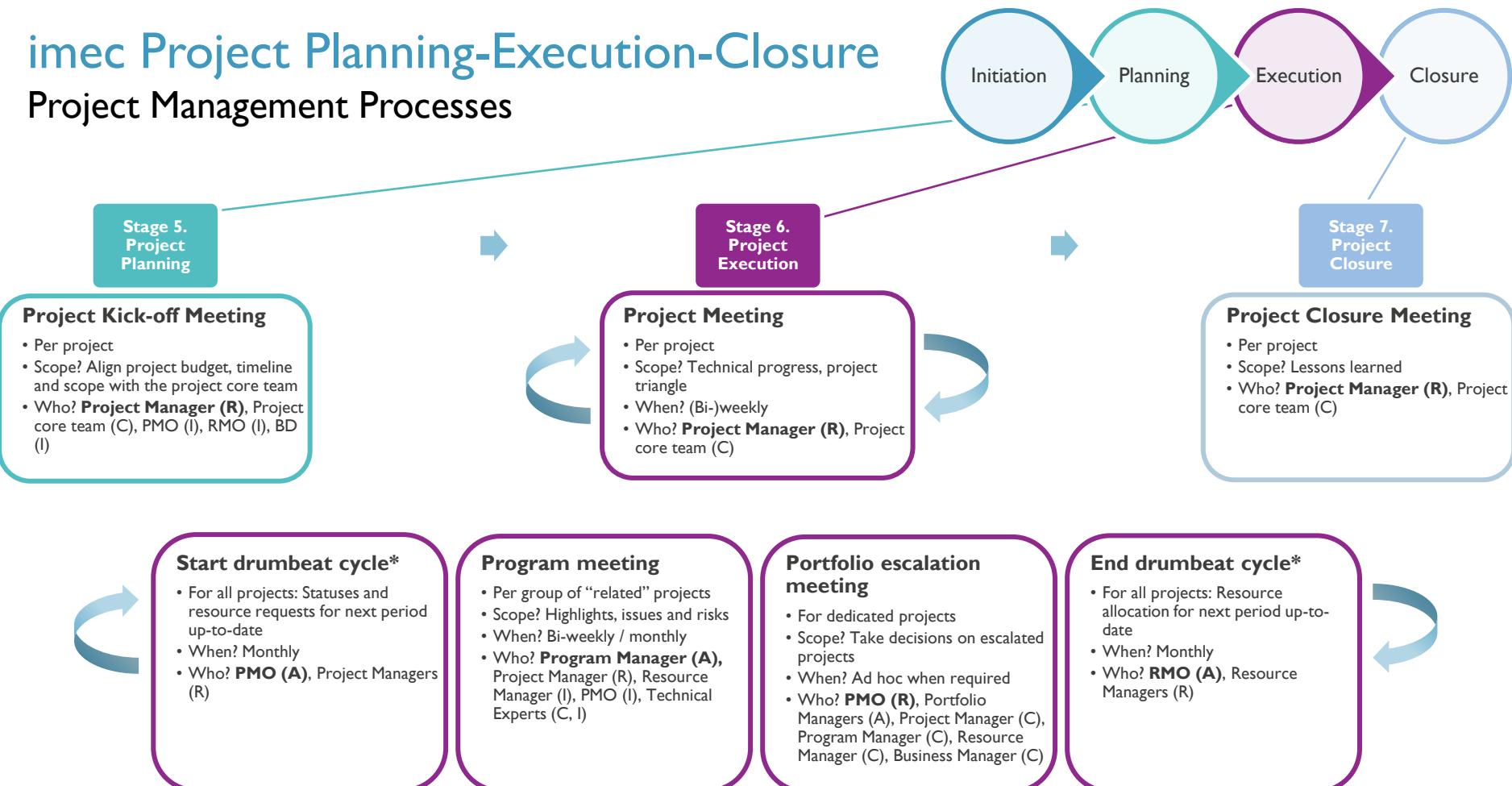
Project A		34.61	26.92	0.00	37.90	21.11	0.00	34.61	34.61	0.00
		Request	Allocation	Actuals	Request	Allocation	Actuals	Request	Allocation	Actuals
	Organization/ IMEC / SECTORS / IC	1.92	0.00	0.00	2.11	0.00	0.00	1.92	0.00	0.00
	Organization/ IMEC / EXPCENTERS / ... / BECHEM / NES	32.69	0.00	0.00	35.80	0.00	0.00	32.69	32.69	0.00
	Organization/ IMEC / EXPCENTERS / ... / BECHEM / NES	0.00	13.00	0.00	0.00	9.00	0.00	0.00	0.00	0.00
	Organization/ IMEC / EXPCENTERS / ... / BECHEM / NES	0.00	4.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00
	Organization/ IMEC / EXPCENTERS / ... / BECHEM / NES	0.00	4.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
	Organization/ IMEC / EXPCENTERS / ... / BECHEM / NES	0.00	4.00	0.00	0.00	3.00	0.00	0.00	0.00	0.00
	Organization/ IMEC / EXPCENTERS / ... / BECHEM / FFD	0.00		0.00	0.00		0.00	0.00	0.00	0.00



Project escalation at imec

imec Project Planning-Execution-Closure

Project Management Processes



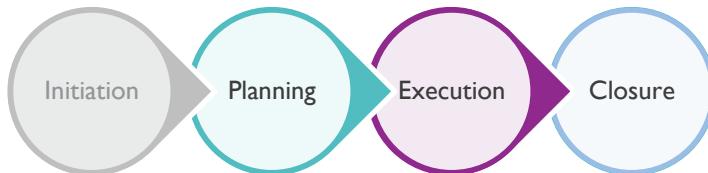
* Not a meeting but a call for action

** We define a program as a group of related projects.

Governance during project planning - execution - closure

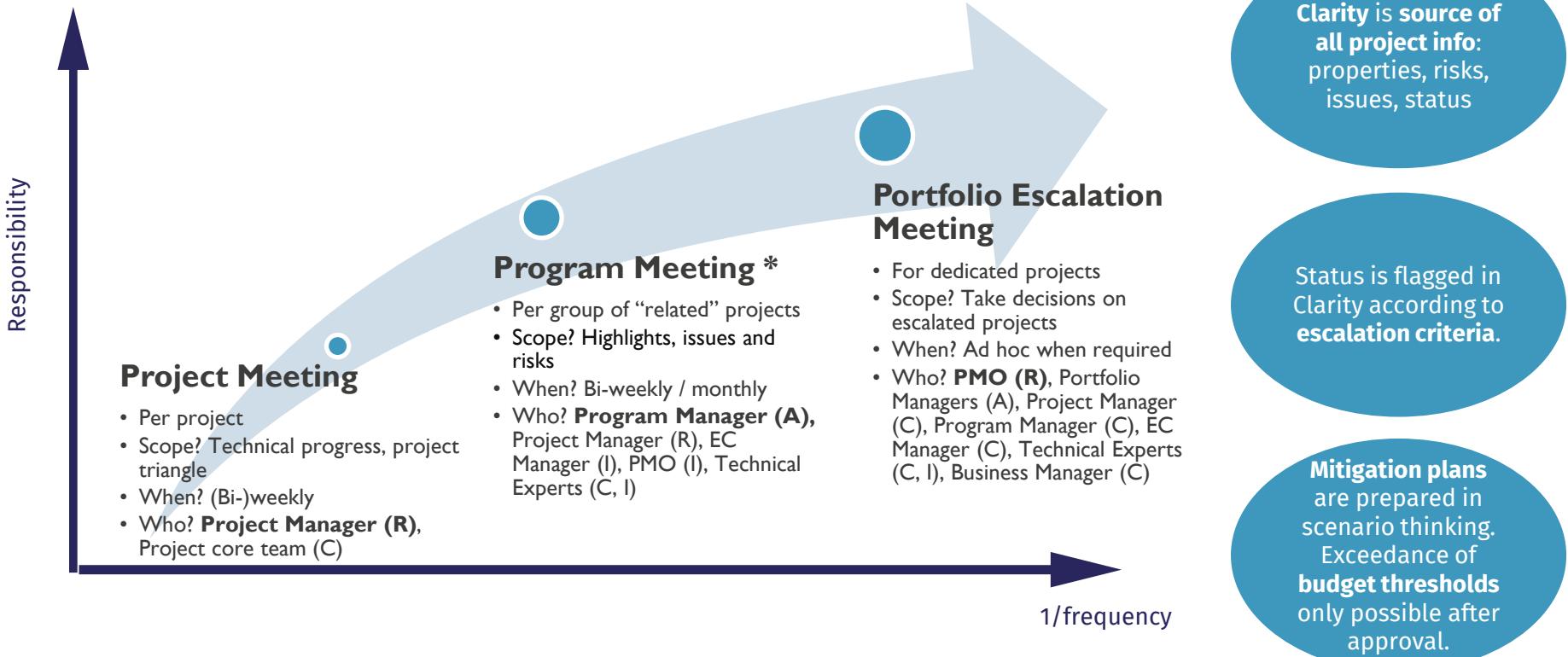
Goals

- Provide project managers with:
 - Guidelines to flag project status
 - Budget thresholds allowing to take project ownership
 - Escalation paths for projects in need of input from project stakeholders
- Provide project stakeholders with:
 - Up-to-date project/portfolio status on a “pull” base
 - Budget thresholds as safeguards on project budget
 - Escalation paths to steer directions on escalated projects



Governance during project planning - execution - closure

Uniform way of information sharing & escalation



* We define a program as a group of “related” projects

Escalation criteria

Project manager flags project status in Clarity according to escalation criteria

Project status based on escalation criteria scope/schedule/budget:		Expected impact of risk or issue		
Estimated probability of risk	< 10k	< 100k	≥ 100k	
	< 25%	Green	Green	Green
	< 50%	Green	Green	Yellow
	≥ 50%	Green	Yellow	Red
Issue 100%		Green	Yellow	Red

- Examples of risk and issues with an expected impact $\geq 100k$:
 - cost of project is increasing $\geq 100k$ above budget (put “budget status” on red)
 - billable milestone valued $\geq 100k$ is delayed by ≥ 2 weeks (put “planning status” on red)
 - specs of a billable milestone valued $\geq 100k$ are insufficient to be accepted by customer (put “scope status” on red)

* Escalation criteria of 10k and 100k are examples

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embracing a better life