

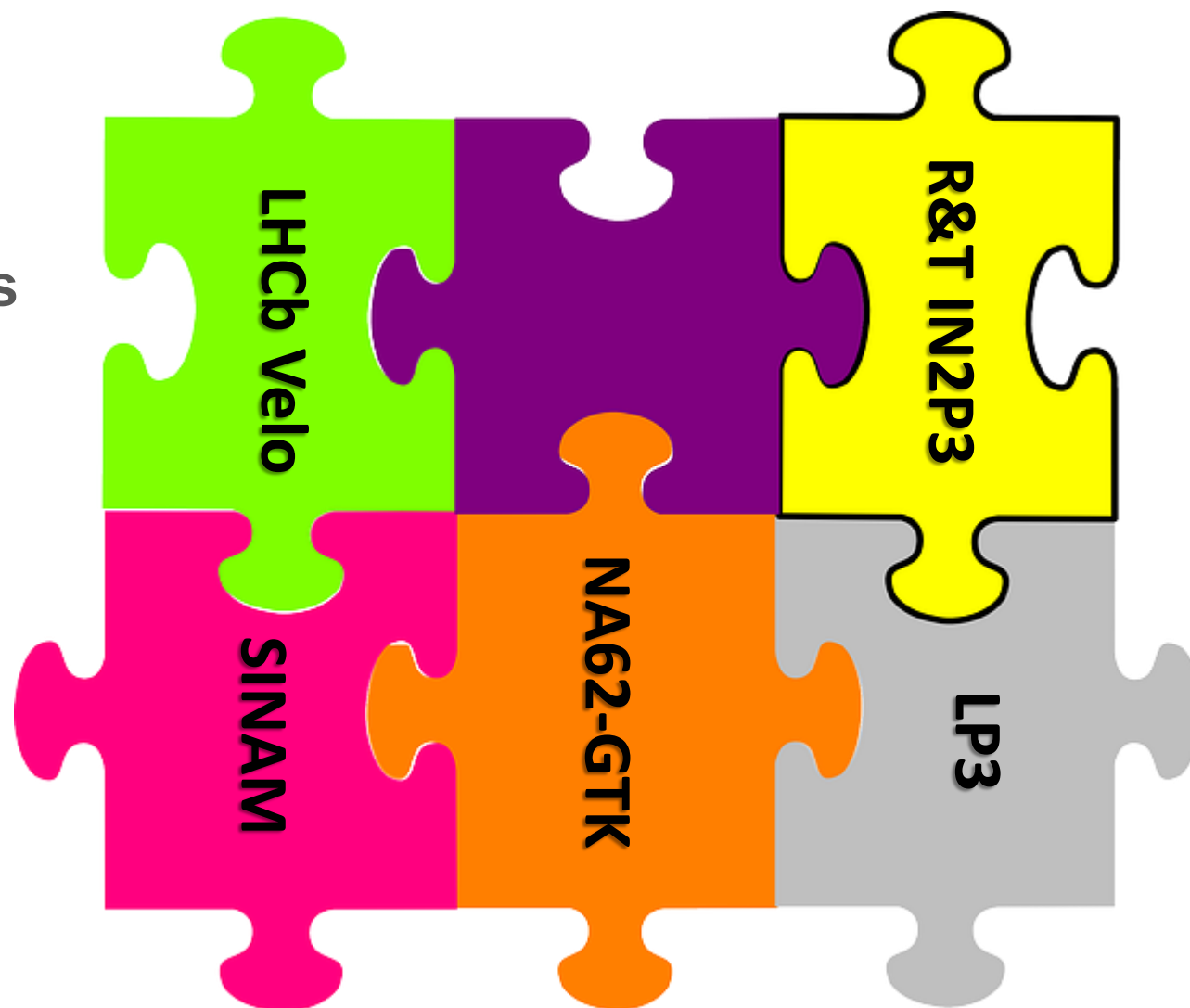
STRATEGIE MICROCANAU

28 Janvier 2020

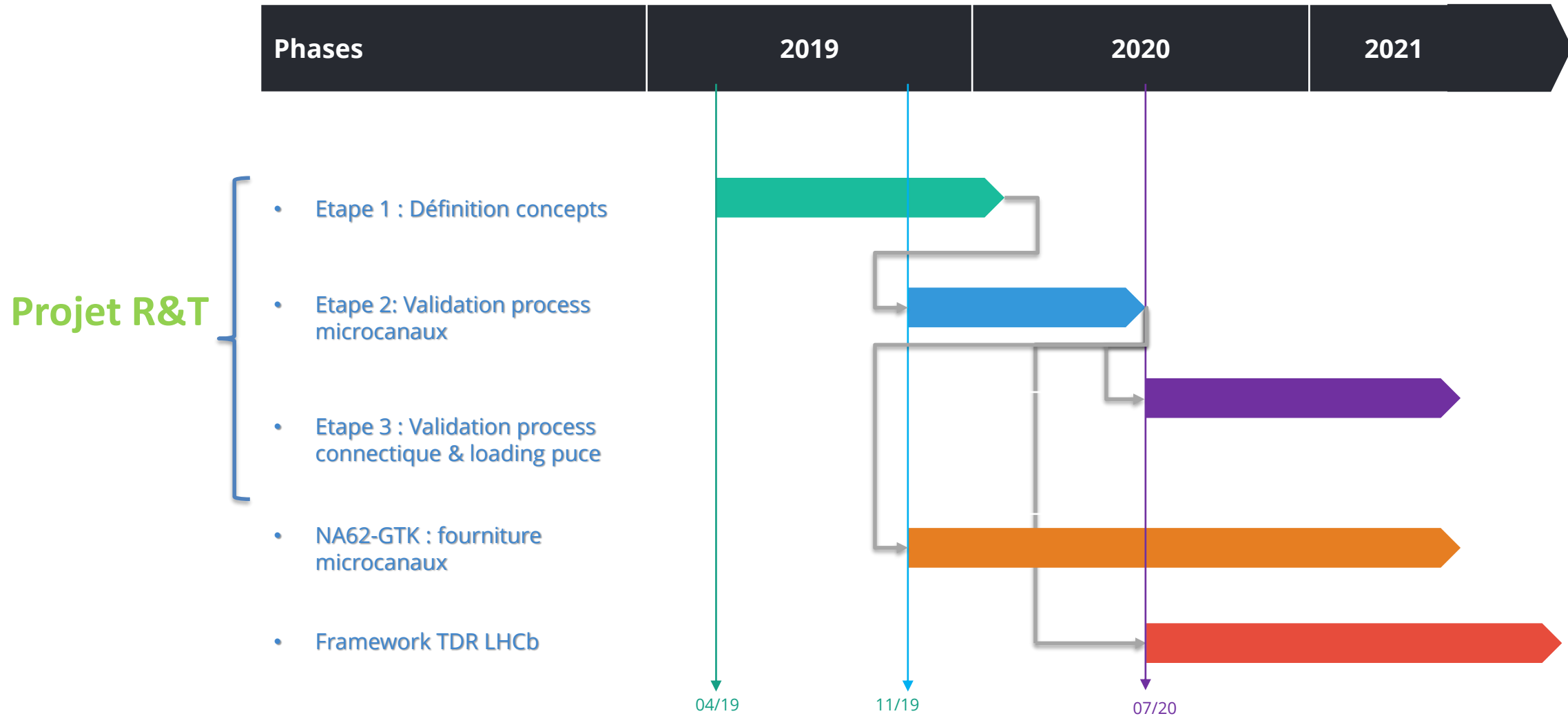
RÉPONDRE AUX DIFFÉRENTS BESOINS

Nécessité de trouver des développements qui soient utiles pour chaque projet/laboratoire

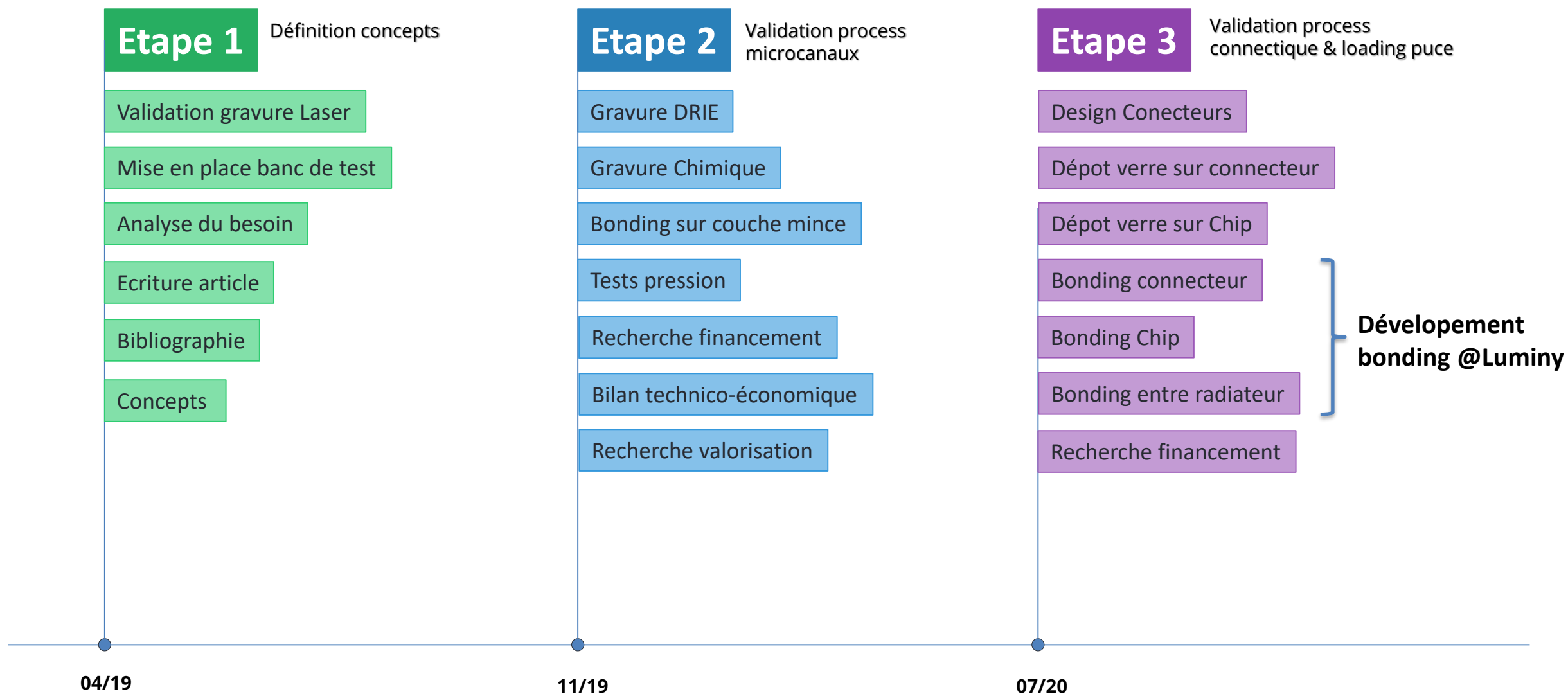
→ Coopérations



PHASAGE PROJETS

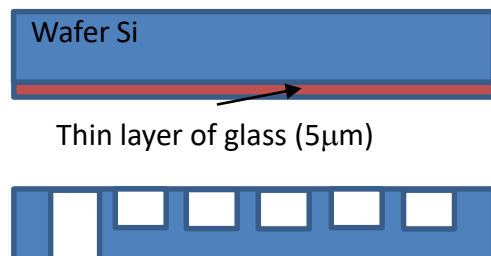


ETAPES PROJET R&T

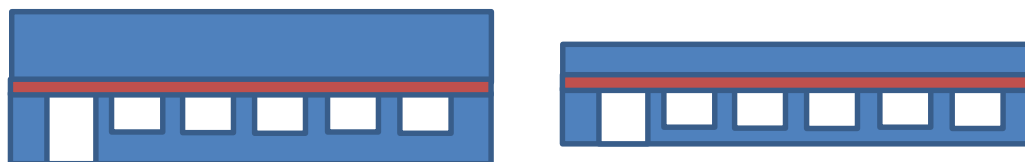


ETAPE 1: DÉFINITION CONCEPTS

Glass deposition



Process microcanaux

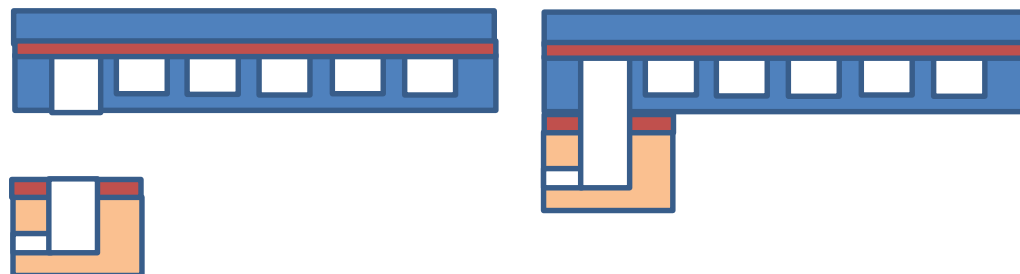


Etching

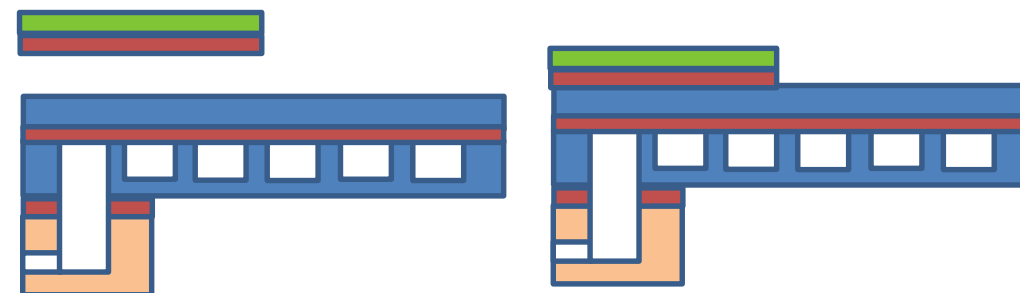
Anodic Bonding

Thining

Process connectique



Process puce



Glass on connector

Connector bonding

Glass on chip

Bonding chip

AVANCEMENT ETAPE 2: VALIDATION PROCESS MICROCANAU

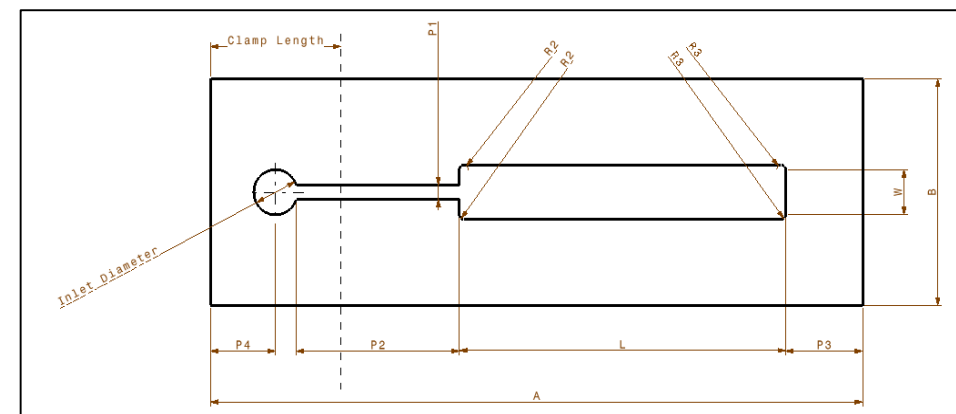
Projects & Tasks	Start – End date	(1)	Nov	Dec	Jan	Fev	Mar	Avr	Mai	Jui	Jui	Aou	sept	oct
Etape 2	Nov 2019 → Jui 2019	✓												
• Tests Gravure chimique	Nov – Dec	✓	100%											
• Gravure DRIE	01 Jan– 14 Fev	↻			30%									
• Bonding	1 Mar – 15 Avr	✗					0%							
• Amincissement et découpe	01 Mai – 30 Mai	✗							0%					
• Tests pression	2 Jul – 27 Sept	↻		20%										

(1) Level of completion:

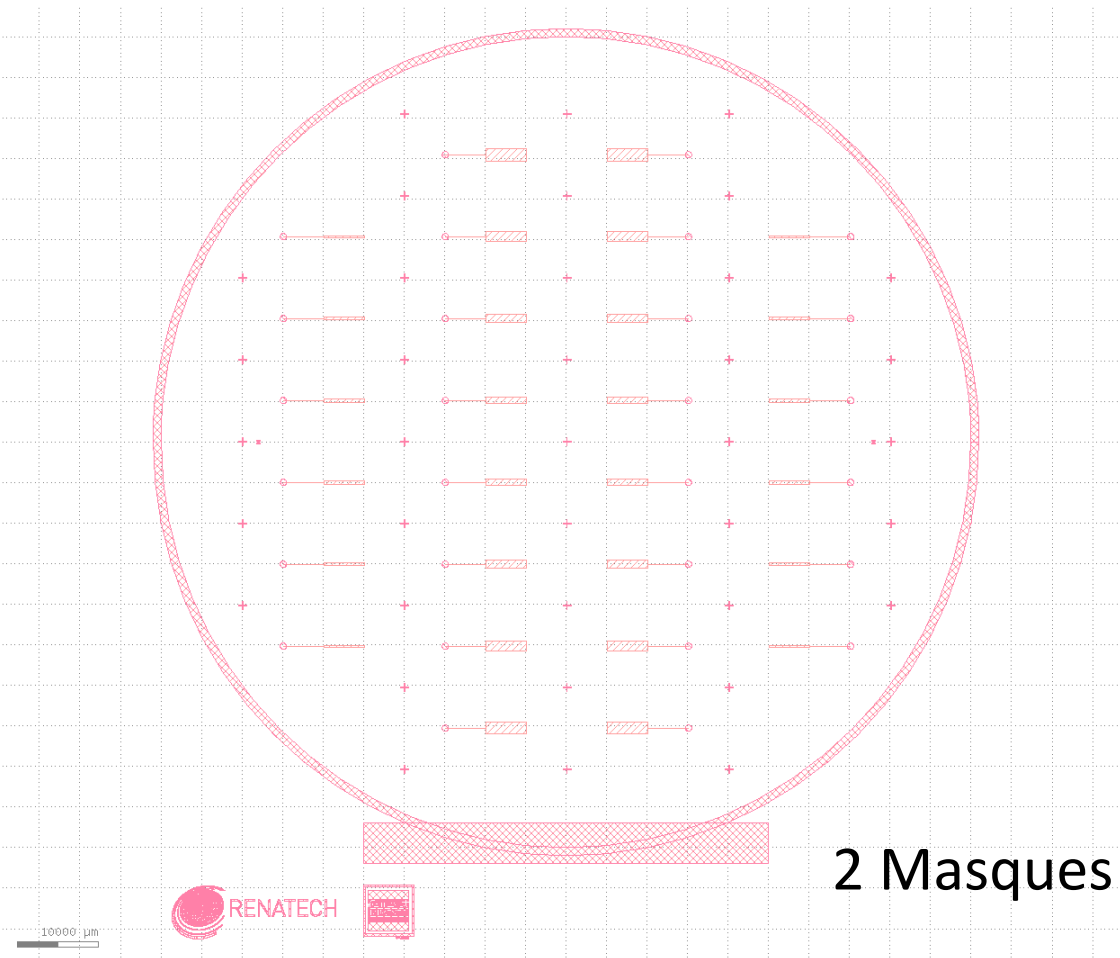
- ✓ completed
- 🔄 on-going
- ⚠ issues / deferred
- ✗ not started

AVANCEMENT ETAPE 2: GRAVURE DRIE - DESIGN MASQUE

Motif pour test pression suivant préconisations CERN



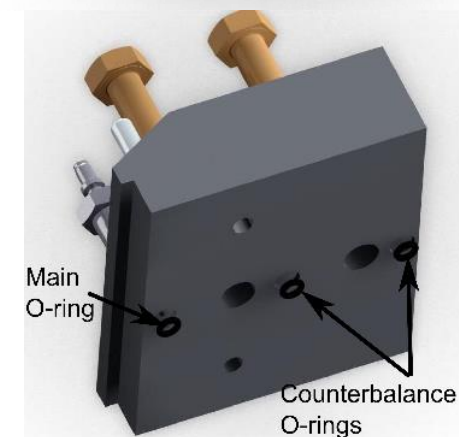
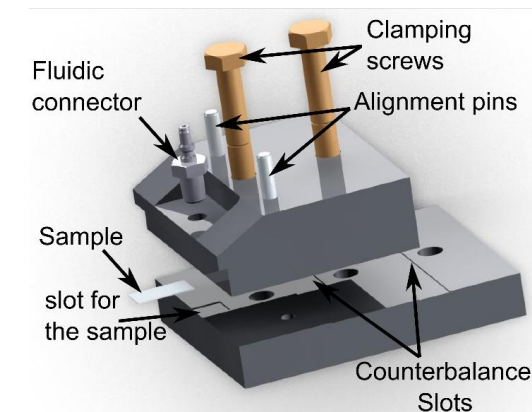
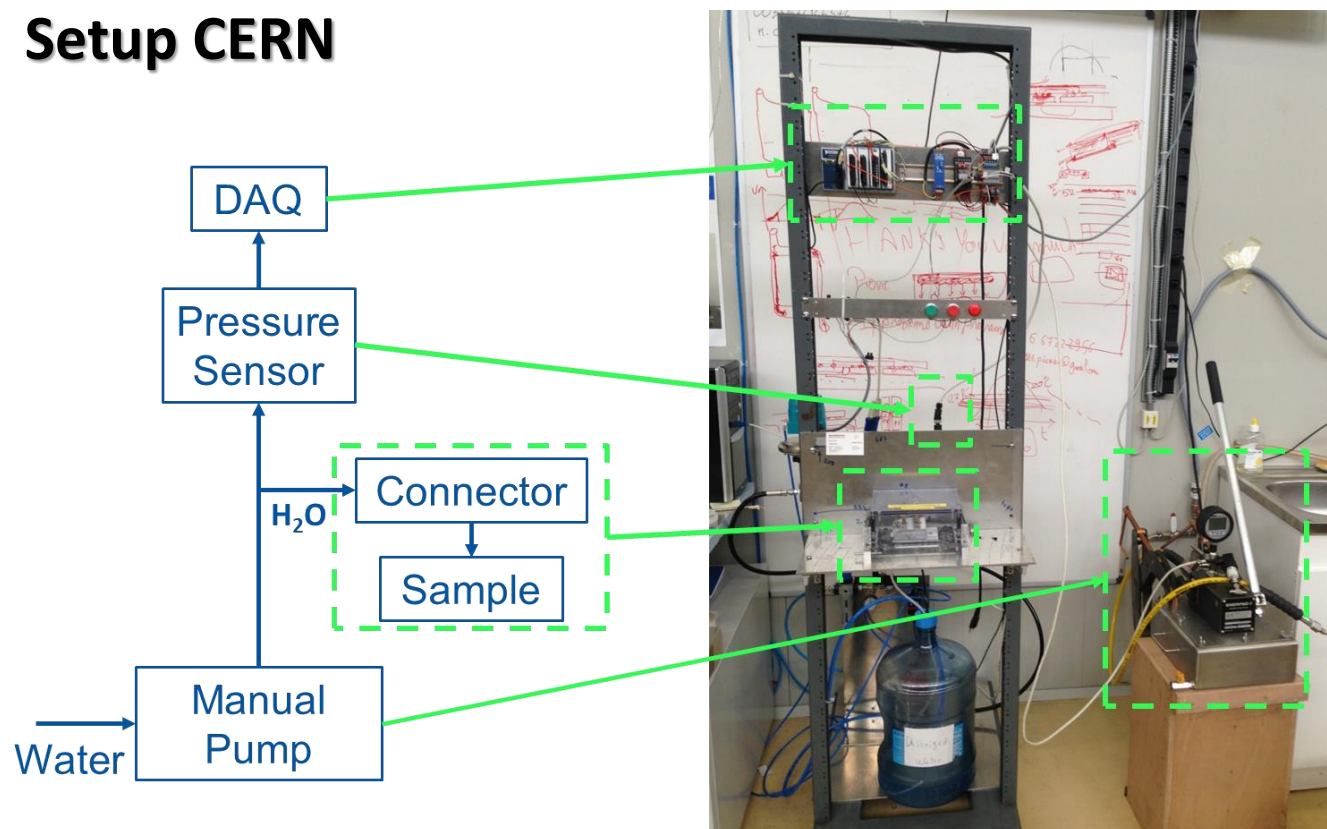
Sample's dimensions				
External dimensions	A	[mm]	20	
	B	[mm]	10	
	H	[μm]	550	
Channel	W	[μm]	[100,200,350,500,750,1000,1250,1500]	
	D	[μm]	280	
	t1	[μm]	t1=t2=[70,100,135]	
	t2	[μm]	t1=t2=[70,100,135]	
	R1	[μm]	0	
Additional information	R2	[μm]	0	
	R3	[μm]	0	
	L	[μm]	5000	
	P1	[μm]	50	
	P2	[μm]	4200	
	P3	[μm]	7040	
	P4	[μm]	2960	
	Clamp Length	[μm]		
	Inlet_Diameter	[μm]	1600	



2 Masques fabriqués

AVANCEMENT ETAPE 2: ESSAIS PRESSION

Setup CERN



Connecteur

Duplication setup ou utilisation moyens CERN?
→ Décision en mai en fonction avancement et budget