Hello TEAM PA

PA Engineering Meeting
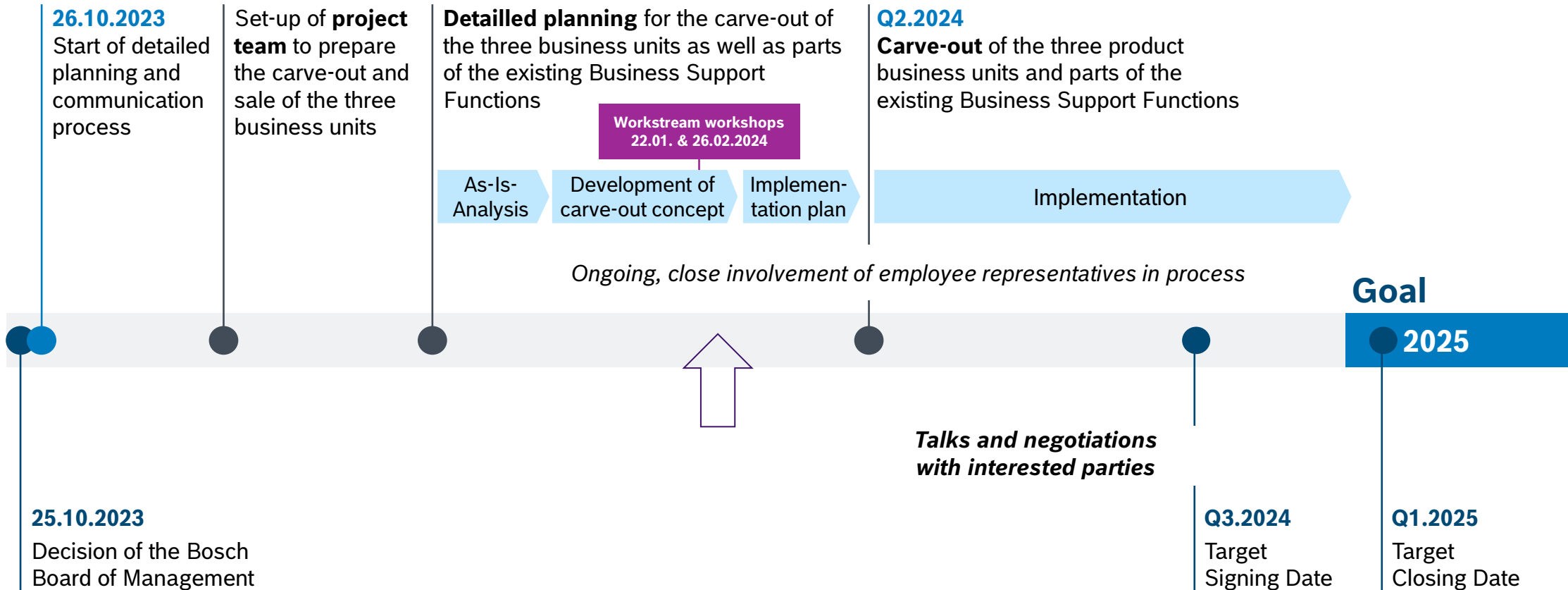
Feb 27, 2024

PA Engineering Meeting
Agenda

- NewCo news, what is next ....
  - Re-branding
  - IT workstream
- Employee changes
- Growth plans status
  - Open vacancies
- PA business status
- Observations ISE '24
- Project Landscape & Project priorities & Project updates
  - SW roadmap
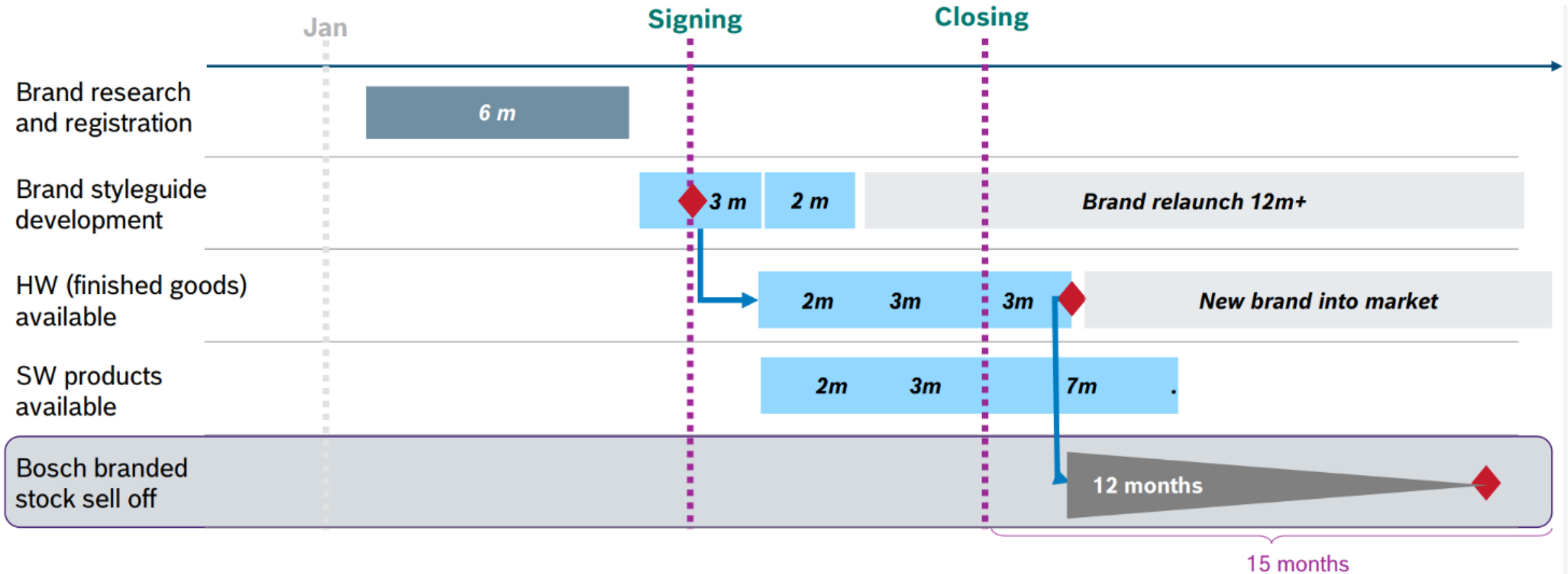- ENG1 behind the scenes
  - PA floorplan Building TX
- Q&A

TEAM PA BOSCH

PA Engineering Meeting
How do we make the change happen?

26.10.2023
Start of detailed planning and communication process

Set-up of **project team** to prepare the carve-out and sale of the three business units

Detailled planning for the carve-out of the three business units as well as parts of the existing Business Support Functions

Q2.2024
Carve-out of the three product business units and parts of the existing Business Support Functions

Workstream workshops 22.01. & 26.02.2024

As-Is-Analysis | Development of carve-out concept | Implementation plan | Implementation

Ongoing, close involvement of employee representatives in process

Goal

2025

25.10.2023
Decision of the Bosch Board of Management

Talks and negotiations with interested parties

Q3.2024
Target Signing Date

Q1.2025
Target Closing Date

BOSCH

PA Engineering Meeting
Re-branding

PA Engineering Meeting
Re-branding

Scrap
?ME

ASA
0ME

Certification
2ME

Training
2KE

HWM, HWE, SW
9.5ME

LFL India & China
200K

BT-CO: 12+ ME
(Hours + Materials)

Marketing
5ME

Packaging & Customer documentation
BT: 2.5ME

newco

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PA Engineering Meeting
New PA Colleagues

Welcome

- **Alexandra Ioan** (BT-CO/ENG1) -> Role: Student Fontys -> Knowledge Kiosk

- **Andre Sniekers** (BT-CO/ENG1) -> Role: Student Fontys -> Pre-studies AiO

- **Anh Truong** (BT-CO/ENG1) -> Role: Data Analyst

Coming soon:

- March 1: **Ireen Spoormakers** (BT-CO/ENG1) -> Role: Management Assistant

- March 11: **Francisco Fonseca** (BT-CO/ENG1.1) -> Role: Infrastructure Engineer

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PA Engineering Meeting
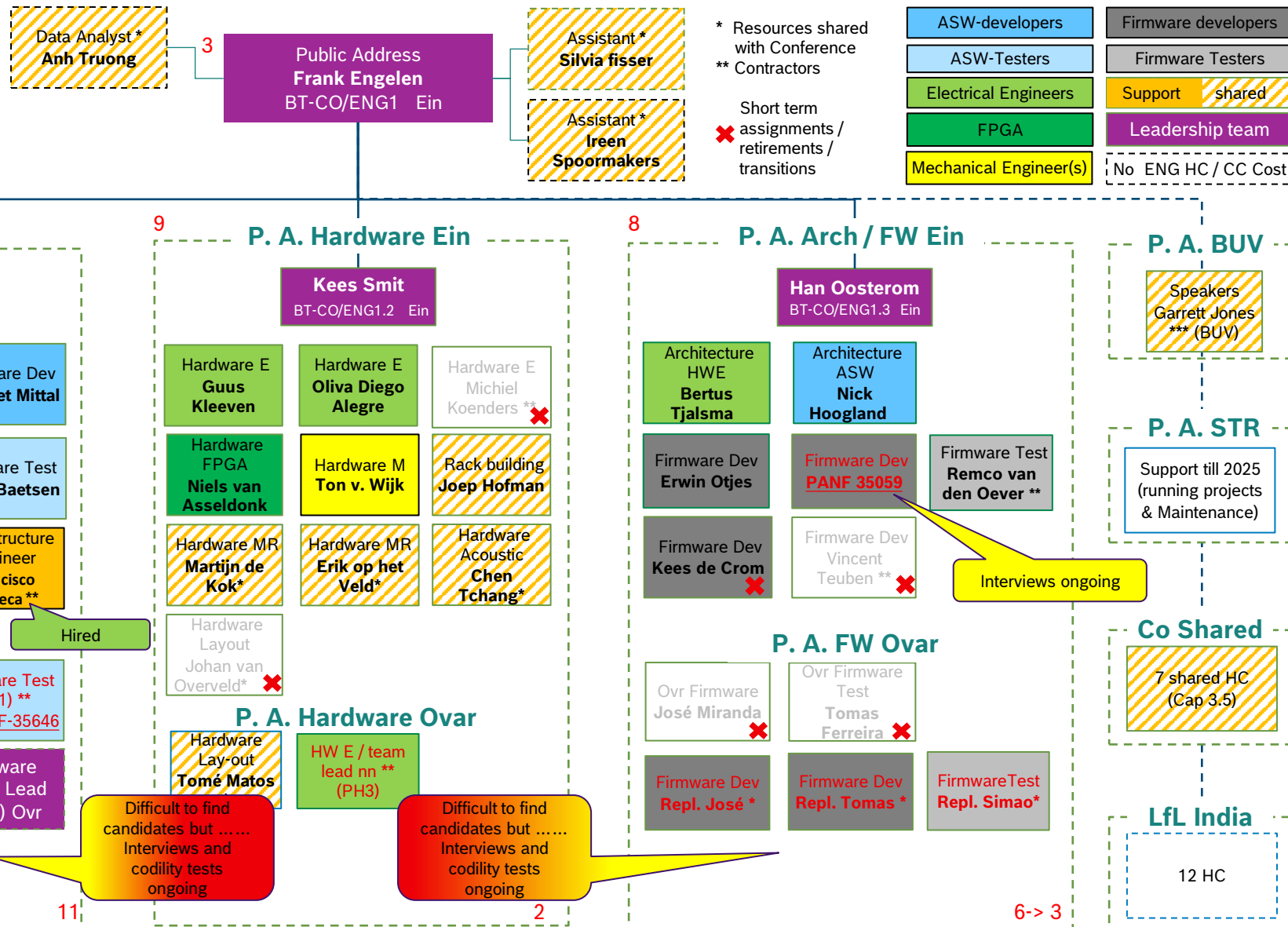## Colleagues leaving

- **Vincent Teuben**   -> Special assignment Wall Control Panel ending

- **Michiel Koenders** -> Special assignment CS extension Kit ending

- **Ger van Dongen**   -> Retired

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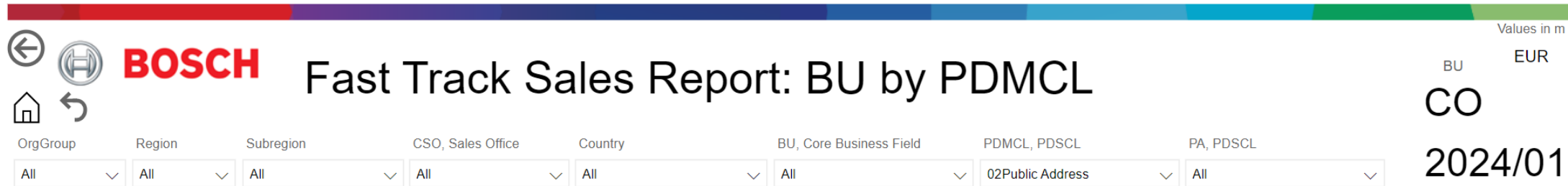
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PA Orch. Chart
Discipline view

Legend:
- ASW-developers
- ASW-Testers
- Electrical Engineers
- FPGA
- Mechanical Engineer(s)
- Firmware developers
- Firmware Testers
- Support / shared
- Leadership team
- No ENG HC / CC Cost

* Resources shared with Conference
** Contractors

❌ Short term assignments / retirements / transitions

Data Analyst * Anh Truong — 3

Public Address Frank Engelen BT-CO/ENG1 Ein

Assistant * Silvia fisser

Assistant * Ireen Spoormakers

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12 — P. A. Software Ein

Interviews started

Lars Kaijser BT-CO/ENG1.1 Ein

Software Dev **Jeroen Alink**	Software Dev **Nick Bezembinder**	Software Dev **Gerrit Til**	Software Dev **Navneet Mittal**
Software Dev **PANF 35208**	Software Test **Harrie Nijsten**	SoftwareTest **Mohammed Ambari**	Software Test **Frans Baetsen**
Software Test **Roger Vankan**	SoftwareTest **Gorkem Narinoglu ****	Software Test **Hari Krishna Yadiki *** (BGSW)	Infrastructure Engineer **Francisco Fonseca ****

Hired

P. A. Software Ovar

Software Dev (PH1) STPANF-35641	Software Dev (PH1) ** STPANF-35642	Software Dev (PH1)** STPANF-35643	Software Test (PH1) ** STPANF-35646
Software Arch. (PH2)	Software Dev (PH2)	SoftwareTest (PH2)	Software Team Lead (PH2) Ovr
Software Dev (PH3)	Software Dev (PH3)	Software Test (PH3)	

11

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9 — P. A. Hardware Ein

Kees Smit BT-CO/ENG1.2 Ein

Hardware E **Guus Kleeven**	Hardware E **Oliva Diego Alegre**	Hardware E Michiel Koenders ** ❌
Hardware FPGA **Niels van Asseldonk**	Hardware M **Ton v. Wijk**	Rack building **Joep Hofman**
Hardware MR **Martijn de Kok***	Hardware MR **Erik op het Veld***	Hardware Acoustic **Chen Tchang***
Hardware Layout Johan van Overveld* ❌		

P. A. Hardware Ovar

Hardware Lay-out **Tomé Matos**	HW E / team lead nn ** (PH3)

Difficult to find candidates but ...... Interviews and codility tests ongoing

2

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8 — P. A. Arch / FW Ein

Han Oosterom BT-CO/ENG1.3 Ein

Architecture HWE **Bertus Tjalsma**	Architecture ASW **Nick Hoogland**	
Firmware Dev **Erwin Otjes**	Firmware Dev **PANF 35059**	Firmware Test **Remco van den Oever ****
Firmware Dev **Kees de Crom** ❌	Firmware Dev Vincent Teuben ** ❌	

Interviews ongoing

P. A. FW Ovar

Ovr Firmware José Miranda ❌	Ovr Firmware Test Tomas Ferreira ❌	
Firmware Dev **Repl. José ***	Firmware Dev **Repl. Tomas ***	FirmwareTest **Repl. Simao***

Difficult to find candidates but ...... Interviews and codility tests ongoing

6-> 3

P. A. BUV

Speakers Garrett Jones *** (BUV)

P. A. STR

Support till 2025 (running projects & Maintenance)

Co Shared

7 shared HC (Cap 3.5)

LfL India

12 HC

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PA Business update
TNS, IM1, EBIT, R&D budget, NPI's

Values in m

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Fast Track Sales Report: BU by PDMCL

BU   EUR

CO

2024/01

OrgGroup	Region	Subregion	CSO, Sales Office	Country	BU, Core Business Field	PDMCL, PDSCL	PA, PDSCL
All	All	All	All	All	All	02Public Address	All

Act MTD development woc (w/ BP rates)

◆ % BP woc ● % PY woc

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Act YTD to BP

0.00   9.90   102.73

Act YTD	STG to BP	STG % woc	% PY woc
9.90 abs.	92.83 abs.	-8.9 % % PY woc	
9.78 vs. BP woc	92.95 BP woc		-5.6 %
-100.0 % % BP woc			-8.6 %

● Act YTD ● TY BP ● TY FC

Sales by PDMCL: drilldown by Region / Subregion / CSO / Country

Org. Group	Jan	Feb	Mar	YTD03	vs. BP woc	Apr	May	Jun	YTD06	vs. BP woc	Jul	Aug	Sep	YTD09	vs. BP woc	Oct	Nov	Dec	YTD12	vs. BP woc	YTD	vs. BP woc	% BP woc	STG to BP woc	TY BP	TY FC	TY PY
RSO	9.51			9.51	9.40				9.51	9.40				9.51	9.40				9.51	9.40	9.51	9.40	-100....	94.49	103.89		109.40
Sales to IB	0.31			0.31	0.31				0.31	0.31				0.31	0.31				0.31	0.31	0.31	0.31	-100....	3.07	3.38		3.50
ASA	0.08			0.08	0.08				0.08	0.08				0.08	0.08				0.08	0.08	0.08	0.08	-100....	0.89	0.97		1.05
Global/OEM																								-5.50	-5.50		0.00
Total	**9.90**			**9.90**	**9.78**				**9.90**	**9.78**				**9.90**	**9.78**				**9.90**	**9.78**	**9.90**	**9.78**	**-100....**	**92.95**	**102.73**		**113.95**

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Observations ISE '24

ISE 2024
Bosch Booth + feedback

BOSCH

ISE 2024
Observations Competition

- TOA -> IP speaker system

- AtlasIED -> non EVAC

- Zenitel -> trying to move
  onshore

- LPP competition ->EN54

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ISE 2024
Cloud

- LDA
  - Starting but not nothing big yet (monitoring remotely)

- In general, no big cloud announcements or movement from competition

- In adjacent markets monitoring / remote update is sometimes offered (monetization / business model not always clear as it is offered free of charge)

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ISE 2024
Other trends + observations

- MED speakers DNV

- Extron -> smooth GUI for audio control in different rooms

- Samsung -> digital interaction

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PA Roadmap

PA Segment Review
Project priorities

- Ranking unchanged

- Closed:
  - MPS HW update (UL)
  - Metal Firedome "virtually" passed QG4

- Router amplifier
  - Ramp-up slower as planned, but opportunities to recover.
    - EML capacity from Audio module later as expected

HW resource priorities

Prio	Project
1	Wall Control Panel
2	JFK Handheld MIC
3	SW release train
4	UL2572 update
5	Audio Module (SAB/EIN)
7	Metal Fire Dome (TG-Born)
8	Titan (SAB)
9	Extension Kit (PRA-CSEK)
10	German Fireman's Panel (TG-IFAM)
12	Router Amplifier
13	End of Branch
14	MED implementation
15	EN54 network peripherals (TG)

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PA Segment Review
SW Project priorities

- Delay in onboarding SW team for growth plan has (TBD) impact on roadmap

- New development needs / requests
  - Pen-test finding -> Highest Priority
  - NF business opportunity in France
  - UR 26 safety requirements for maritime
  - Re-branding

- Capacity growth
  - Max focus on SW recruitment plan
  - Chasing resiliency initiatives to bring back SW dev. team back to full force (5 -> **3** -> 5)

SW resource priorities

Prio	Project	Size	Must dates
1	Wall Control Panel	22	Q1 '24
2	PEN test finding	?	Q1 '24
3	Call stacking	46	Q2 '24
4	UR 26 (Security MED)	?	
5	Audio Module	60	Nov '24
6	NF	25	
7	UL update	?	
8	CAP 9.30	17	
9	MED	100	Mar '25
10	Router-Amp	200	Q3 '25
11	End of Branch	30	
12	Re-branding	?	Q1 '25
13	Pre-dev AiO	?	
14	Pre-dev CS successor	?	

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ASK commit

				2024	2025				

WCP Q1'24
27

PRA & PRS pentest Q1'24
Size?

Callstacking Q2'24
47

UR E27 Q2'24
Size?

Audio module Q3'24
92

NF France Q4'24
38

CAP 9.30 (1 customer, exotic setup) Q1'25
23

Rebranding Carve-out
40

MED Q2'25
156 (estimating)

Router amp Q3'25
200

End of Branch
32

PA Engineering Growth Plan
Project staffing impact

Project	Status	Remark	Time Impact
Router amplifier	🟡	Critical capacity available to get started. **EML hiring timeline** and transition of EML to IS will be critical for success	+/- 6m -> Dec '25
End of Branch	🟢	Positive feeling to be able to start on time with hiring plan	Starts control on track
Call stacking (SW only)	🟢	Made good progress because other planned activities were not ready to start. Looking into early beta release for NA airports	Running ahead on schedule
Pre-dev. CS successor	🟠	HW resources available when **delay of router amplifier** can be managed	Too early to say
Maritime Directive (MED	🔴	HW resources hired, **SW resources** (Ovar) not available. Impact can be estimated when onboarding starts	Too early to say
All-in-One	🔴	Success depending on **PH2 & 3 hiring** which is not yet approved	Too early to say
Call Station Successor	🔴	Success depending on **PH2 & 3 hiring** which is not yet approved	Too early to say
Public Address Release train	🔴	Success depending on **PH2 & 3 hiring** which is not yet approved	Too early to say
Pre-dev All-in-One	🔴	HW resources available when **delay of router amplifie**r can be managed. SW capacity depending on **PH2 & 3 approval** and onboarding.	Too early to say

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ENG1

BEHIND
THE
SCENES

PA Engineering Meeting
PACo TX Workgroup

- Erwin P

Public Address:
- Kees S
- Bertus T
- Lars K
- Jeroen A
- Roger V
- Frank E

Conference:
- Kerim E
- Jeroen W
- Rutger H
- Joppe E
- Lars v/d H

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PA Engineering Meeting
TX constraints

- **Reduction of floor space**

  - Because of hybrid working, the targeted occupation is 60%

    60% of 400 (employees) = about 250 workspaces

  - Some workspaces & labs will not be reduced with 40%

  - Some workspaces will become flex spaces

    Eg: SW team PA, including flex places 10 employees –> 7 positions

- **Open office**

- BT-CO ENGx will be divided over **2 floors**
  3 & 4, for PACo, including MKP, MKA, MKR and some 'management'

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PA Engineering Meeting
Space calculation

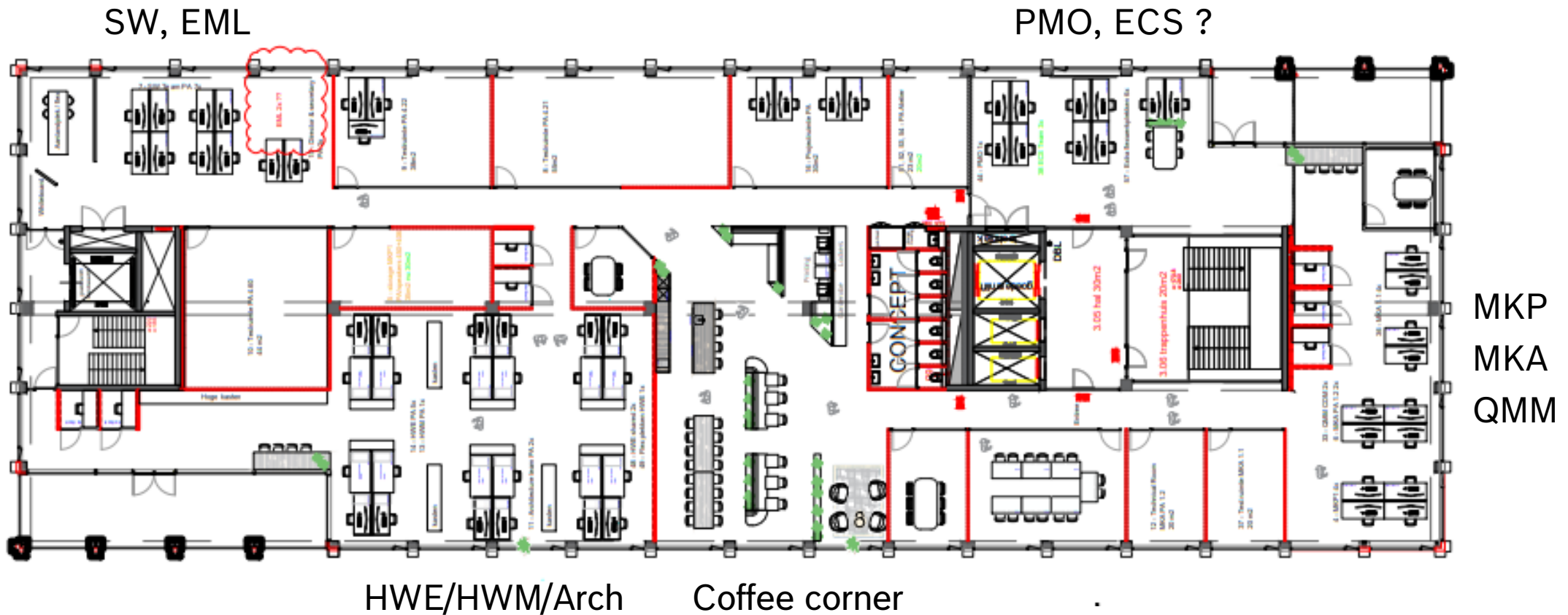| Afdeling	Namen	Personen	Aantal eenheden	werken voor	m² per eenheid	bezetting	plaatsen in TX	vloer 3 PA		vloer 4 Conf	
								plaatsen	m²	plaatsen	m²
MKP1 (PA)	Douwe G , Steven v R, Twan v D, Roel Verst, Joachim L	5	5	PA	8	60	4	4	32		0
storage MKP1 PA/speakers 450+406	storage en demoruime: Wens om deze op de verdieping te hebben		1	PA	35	100	1	1	35		0
MKA PA 1.2	Anton T, Vacature	2	2	PA	8	60	2	2	16		0
SW team PA	Lars K, Nick B, Kees de C, Mittal N, Nick H, Jeroen A, Gerrit T, Ger v D, Flex 1, Flex 2 (2 x flex 100%, 1x80%)	10	10	PA	8	60	7	7	56		0
Testruimte PA, incl Roger en Harry Room 4.21 (10,7m x 5m)	Roger V, Harry N	2	1	PA	38	100	1	1	38		0
Testruimte PA, incl Frans, Gorkem en Mo Room 4.22 (7,8m x 5m)	Frans B, Mohammed A, Gorkem N	3	1	PA	38	100	1	1	38		0
Testruimte groot testsysteem PA Room 4.60 (11,3m x 3,9m)			1	PA	44	100	1	1	44		0
Architecture team PA	Han O, Nick H, Erwin O, Vincent T, Remco vd O, panf 35059, Bertus T	2	2	PA	10	60	2	2	20		0
Technical Room MKA PA 1.2	Nu 361. Op de verdieping		1	PA	20	100		1	20		0
HWM PA	Ton van Wijk	1	1	PA	10	60	1	1	10		0
HWE PA	Kees S, Niels v A, Guus K, Bertus T, HWE designer panf 35085, HWE tester panf 35208	6	6	PA	10	80	5	5	50		0
Director & secretary PA	Frank E, Silvia F	2	2	PA	8	60	2	2	16		0
Projectruimte PA			1	PA	30	100	1	1	30		0
MKP4 (Conf)	Lars vd H, Roel Verh, Derk-Jan E, Kahloh L, Sjack S, Murat K, Vincent V, vacancy 1, vacancy 2	9	9	Conf	8	60	6		0	6	48
Technical Room MKP4	Naaast de Hybrid test en demo room (Nu 507)		1	Conf	20	100	1		0	1	20
Hybrid test and demo room MKP4	Naast de Technical Room MKP4 (Nu 519)		1	Conf	20	100	1		0	1	20
MKA CO 1.2	Bas B, Jeroen de G	2	2	Conf	8	60	2		0	2	16
Technical Room MKA CO 1.2	Nu 360. Op de verdieping. Samen met MKP4 (Conf) gebruiken?		1	Conf	20	100	1		0	1	20
SW team Conference	Cati B, Kadir O, Kerim E, Koen F, Yogesh K, Theo D, Deendayal S, Jaap v R, Kemal S, Suganya S, Akor G, Hamza I, Joppe E, Johan M, Flex 1, Flex 2	16	16	Conf	8	60	10		0	10	80
Testruimte groot testsysteem Conf Room 5.60			1	Conf	44	100	1		0	1	44
Testruimte Conf 5.22	Zitten hier testers?		1	Conf	38	100	1		0	1	38
Architecture team Conference	Hans vd S, Tim Vr, John M, Harish M, Antonie v W, Robert B, Anton P, Rutger H, apprentice 1, apprentice 2	6	6	Conf	10	60	4		0	4	40
HWM Conference	Jeroen W, Ko van B, Martien Kas, Harish M	4	4	Conf	10	60	3		0	3	30
HWE Conference	Paul Gr, Patrick T, Tim Vr	3	3	Conf	10	80	3		0	3	30
Director & secretary Conf	Kiran S, Secretary panf	2	2	Conf	8	60	2		0	2	16
Projectruimte/Ideation room Conf			1	Conf	30	100	1		0	1	30

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PA Engineering Meeting
Wishes

- R&D PA located on the same floor (also applies to Conference)

- Team members of eg SW team situated together

- R&D teams SW, EML, HW, Test close together

- MKP PA located close to R&D

- Space for small test systems

- Flexible places for interns, colleagues from Ovar etc

- As much day-light as possible

- Screens and docking stations on every desk, everybody has his/her's own keyboard and mouse that can be stored somewhere

- Low noise:
  - A lot of small (telephone) boots for meetings and telco's
  - Big Test systems in closed lab's
  - Measures to reduce noise (eg glass walls)

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PA Engineering Meeting
Review drawings & formulate wishes -> work in progress ....

SW, EML

PMO, ECS ?

MKP
MKA
QMM

HWE/HWM/Arch   Coffee corner

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FOCUS

When it matters
(Critical Chain Task)

"Raise Hand"
(When your focus is shifting)

TEAM PM BOSCH

PA Engineering Meeting
Thank you

- **All involved in:**

  Finding the root cause of the MPS belt stop

  Resolving the programming issue to start Wall Control Panel D-run

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