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DEMISABILITY RESEARCH, TECHNOLOGIES, AND A WAY FORWARD TO 2030

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AGENDA OF TOPICS

POINTS OF COMMON INTERESTS

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1. Introductions
2. What are our common interests?
3. Challenges being faced regarding D4D
4. Common outreach

WHO ARE WE?

AND WHY AM I HERE TALKING TO YOU?

PARTICIPANTS AND INTRODUCTIONS

AUTHORS OF THIS PRESENTATION

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LSI COLLABORATION FOR COMMON OBJECTIVES

If everyone is moving forward together, then success takes care of itself.

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- Background and reason for raising the topic

- Design for Demise (D4D) is currently a priority within the European industry, but there is a long way to go until matured design for demise solutions are available.
 - Where are the materials limitations?
 - Where are the structural limitations?
 - Where are the technological limitations?
 - Are we equipped to take this on organisationally?

WHAT'S MY ISSUE?

AND WHERE ARE THE SOLUTIONS?



MEASURING AND FACILITATING DEMISE

CHARACTERISING THE MATERIALS WE USE

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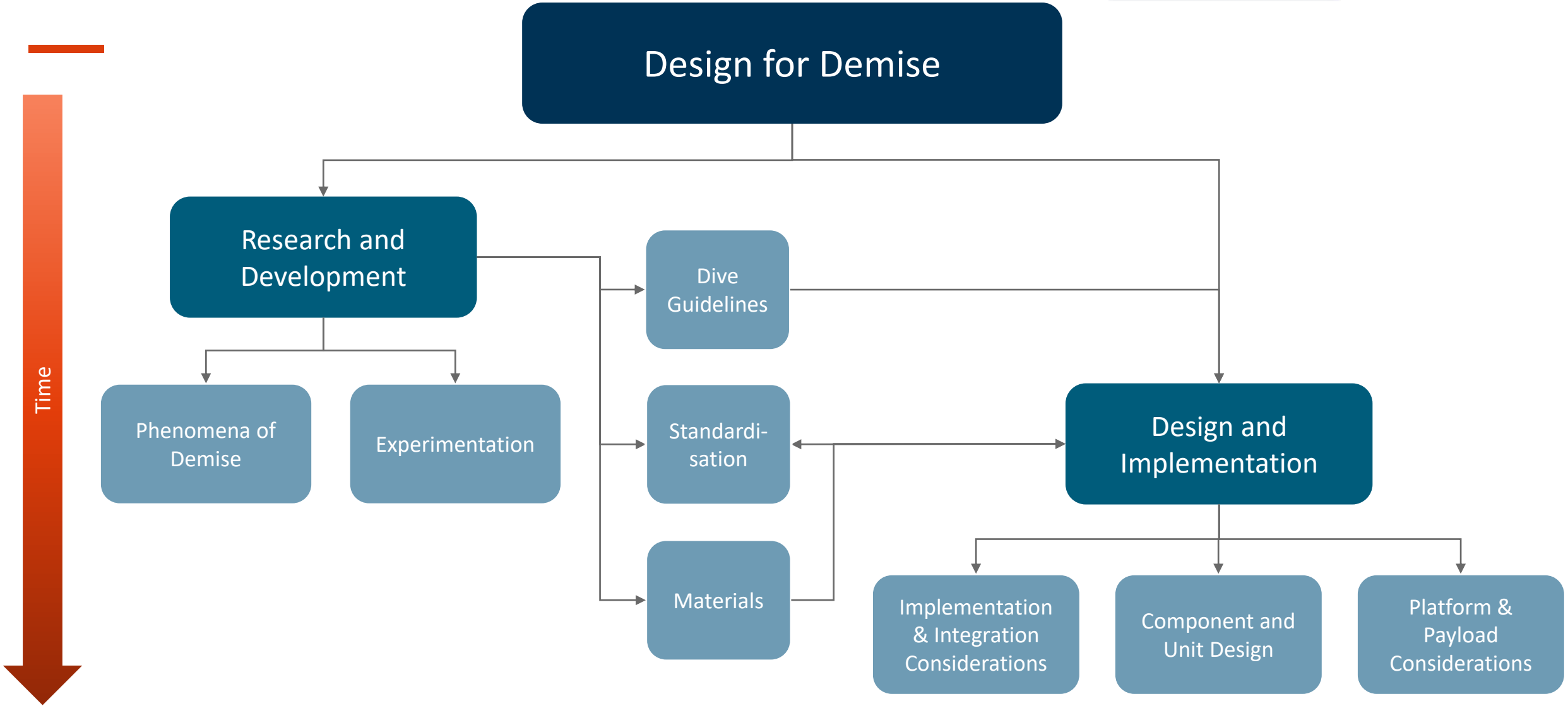


- What do I want to get from this?
 - What information is required, and what is just simply nice to know?
 - What is not just beneficial to know for demisability, but how does this information flow back through to RAMS, FDIR, MTP...?
 - How can we work together on the measurements that we (the LSI's) need?
 - Do we have the necessary facilities and equipment to provide the desired measurements? (Currently underway. Anyone willing to talk? 😊)
 - How can we feed this back to ESA and the industry most effectively?
 - Can we highlight the D4D-applicable materials for tomorrow?

- What are my motivations?
 - D4D is a huge task to take on → Break down into singular tasks to tackle through cooperation and work with the same assumptions → allows the LSI's to prioritise individual interests → accelerated research progress without diminishing quality of results.
 - I want to achieve fully demisable platforms by 2030, and I see it as achievable with a reduction in doubled (or tripled) research efforts.
 - **3 LSI's capable of working together can also test together!**

CONSIDERING DEMISE

SIMPLE AND GENERIC DRIVERS FROM DIFFERENT PERSPECTIVES



LSI COLLABORATION FOR COMMON OBJECTIVES

AN OHB SYSTEM PERSPECTIVE

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- OHB involvement in Zero-Debris Platform will eventually be discussed in these meetings
 - These points are not currently being discussed so that results are not “contaminated” (ESA to lead tri-lateral ZDP discussions as they see fit)

- Framework and expectations for collaboration begun, but still ongoing
 - Common, “simple” goals are an ideal way to begin
 - Ideally, these common goals are not just shared by the LSI’s

- Collaboration with agency, industry, and institutes
 - With a common set of tasks and goals, ESA, institutes, and industry can more easily align with LSIs
 - Orchestration of this ideally not carried out by any one single LSI → agency-led?

- We want to hear from you regarding research desires!

DESIGNING FOR DEMISE

WISH-LIST

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- Materials Research
 - Oxide layers (formation, thermal measurements, ...)
 - Materials development
 - Future materials in S/C design

- Units
 - Reaction Wheels
 - Magnetorquers
 - SADM's
 - Platform Electronics
 - Lenses / Mirrors

- Standardisation
 - Testing Standards
 - DIVE guidelines

- Framework(s) for Exchange
 - Open point



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THANK YOU!

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