

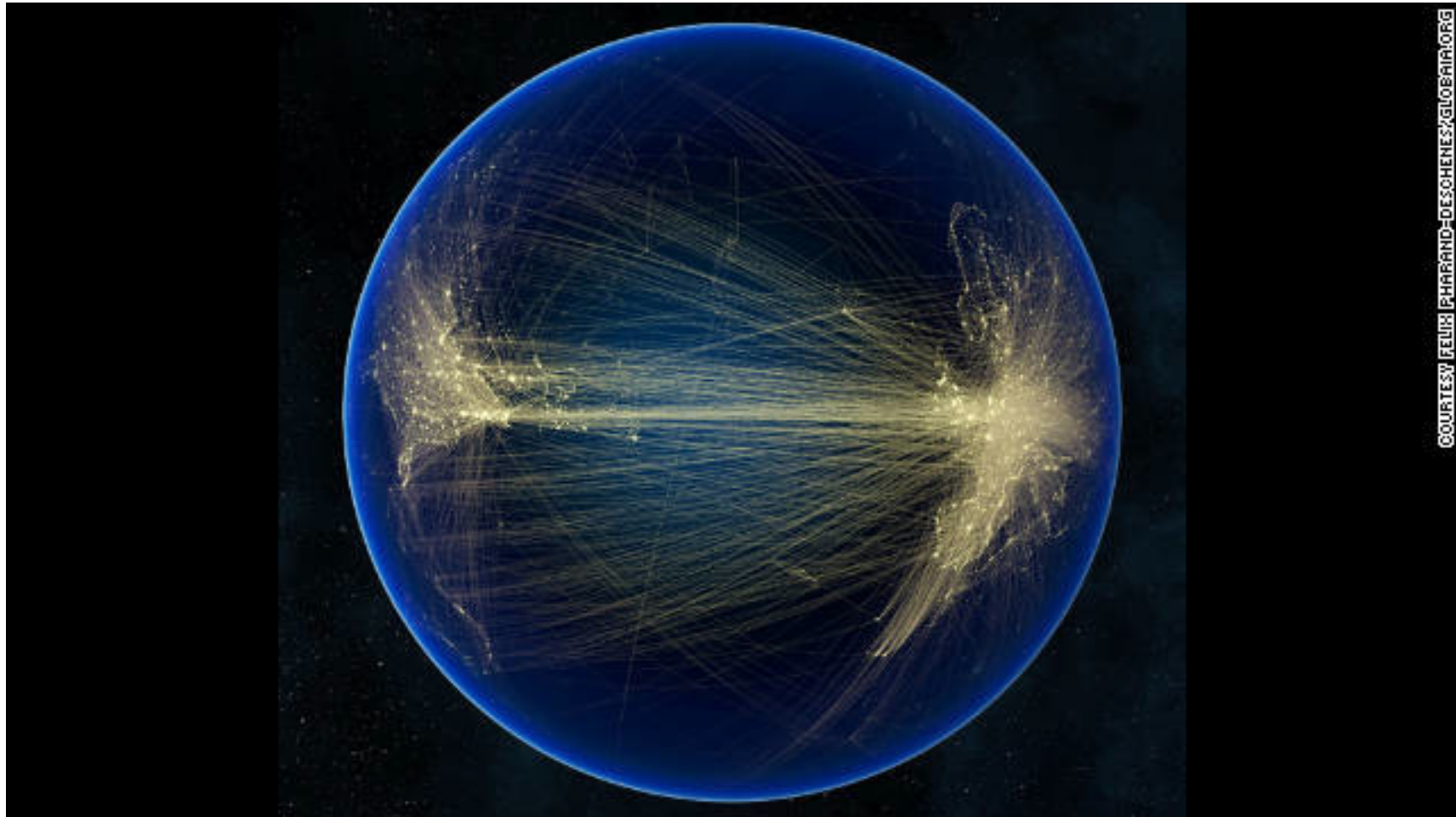
ASSESSING LIABILITY WITH ARGUMENTATION MAPS: AN APPLICATION IN AVIATION LAW

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Schebesta

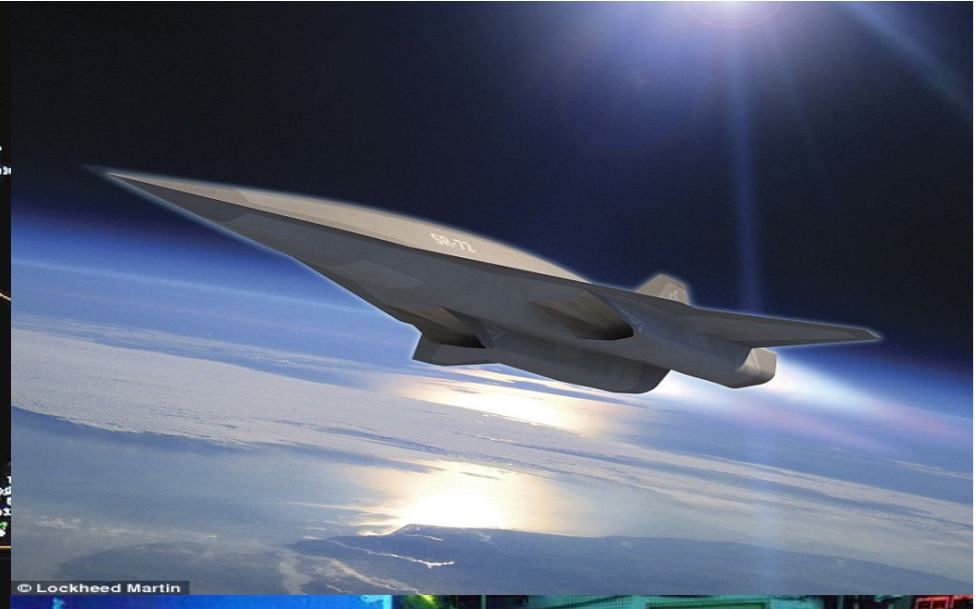
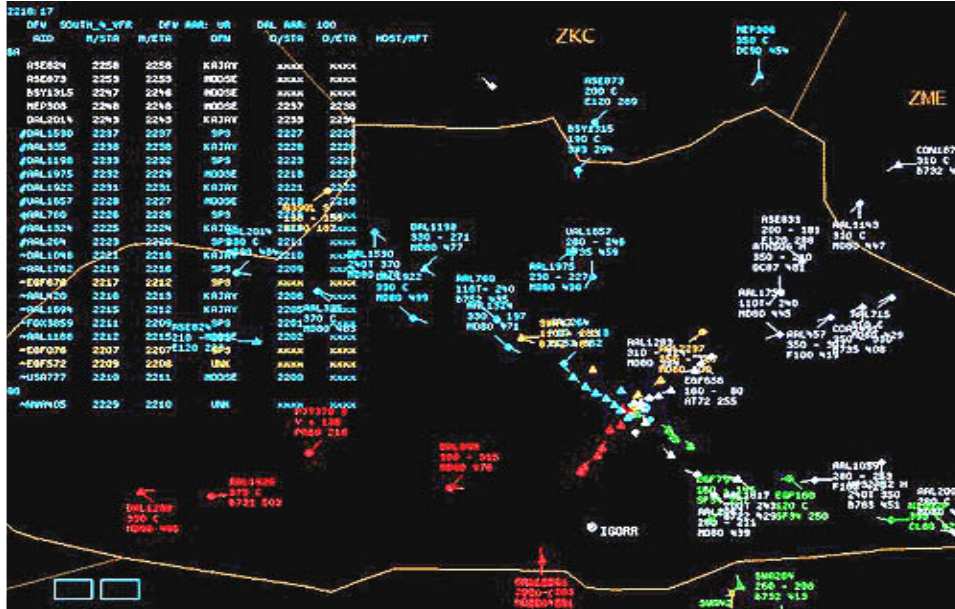
JURIX 2013

December 13, Bologna

CONTEXT: AIR TRAFFIC MANAGEMENT



CONTEXT: SUPER AUTOMATED HIGH-TECH



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CONTEXT: MANY STAKEHOLDERS



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Addressing the Liability Impact

of Automated Systems

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The Project

ALIAS is a challenging and innovative project focusing on the legal implication of automation in complex socio-technical systems. It looks at liability attribution as an emerging fundamental issue of human-technology interaction to be taken into account in highly automated environments.

The project is co-financed by **EUROCONTROL** acting on behalf of the **SESAR Joint Undertaking** with funds from the **EUROPEAN UNION** as part of **Work Package E**.

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ALIAS project: THE LEGAL CASE

So as to address this problem at the early stage of design, we have developed **The Legal Case** methodology.

4 steps:

- 1. Understand** the concept
- 2. Identify** the liability issues
- 3. Perform** the legal analysis
- 4. Collect** findings and **produce** results

Why THE LEGAL CASE is at JURIX 2013?

The Legal Case:

- 1.maps and classifies** possible failures and damages caused by an automated technology;
- 2.links** failures to hypotheses of liability, so as to suggest at least one hypothesis of liability;
- 3.analyses** the legal rules and arguments supporting the attribution of liability for each of the hypotheses.

How does the Legal Case do this?

- **Map methodology:** A novel way to represent legal issues, including:

- **Classification maps**

- Failures maps
- Damages maps
- Legal Risks maps

- **Argumentation maps**

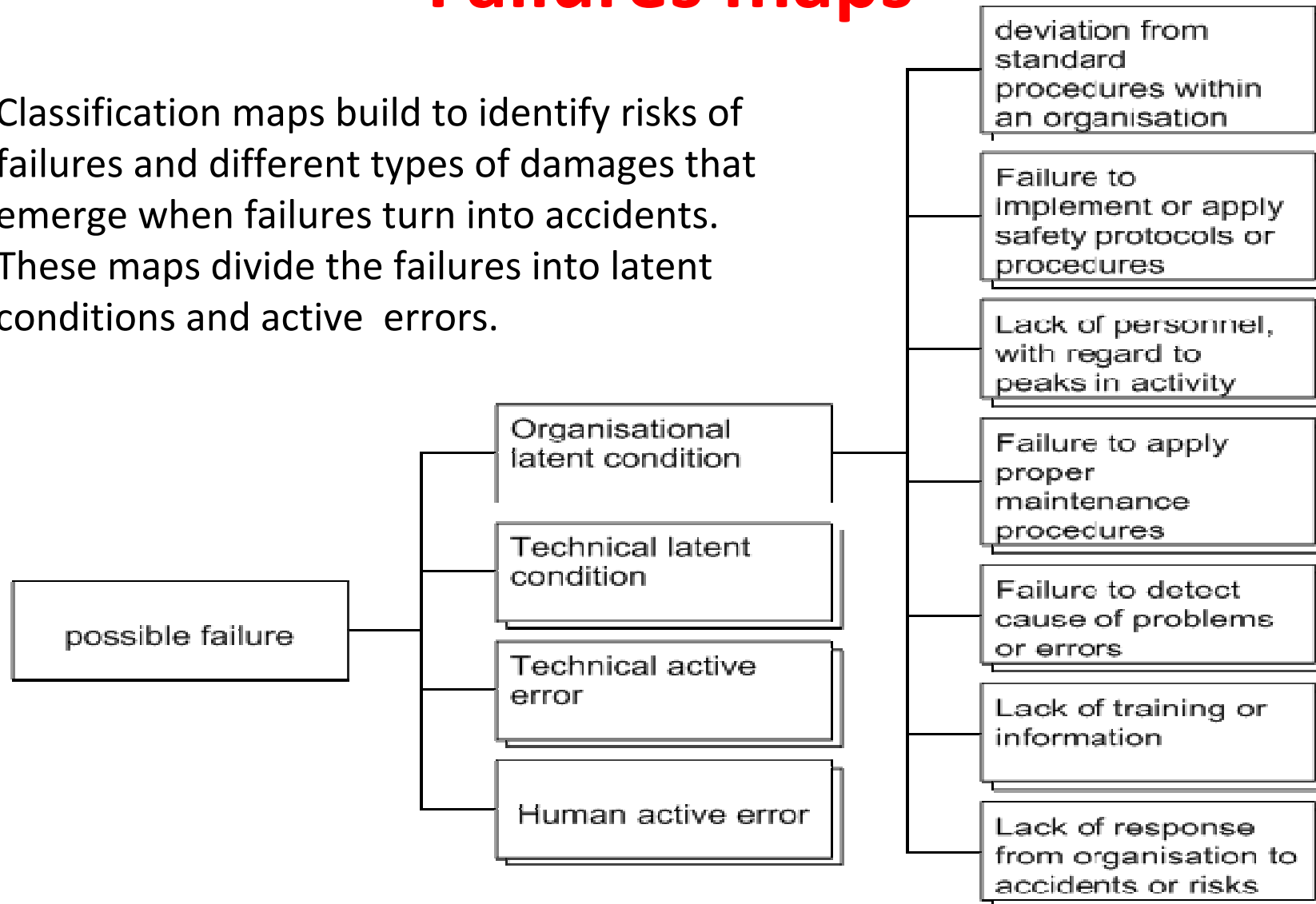
- Legal Analysis maps
- Legal Design maps
- Insurance maps

**Maps are
representation,
connection,
communication
and assessment
tools**

STEP 1 (Understand the concept):

Failures maps

Classification maps build to identify risks of failures and different types of damages that emerge when failures turn into accidents. These maps divide the failures into latent conditions and active errors.

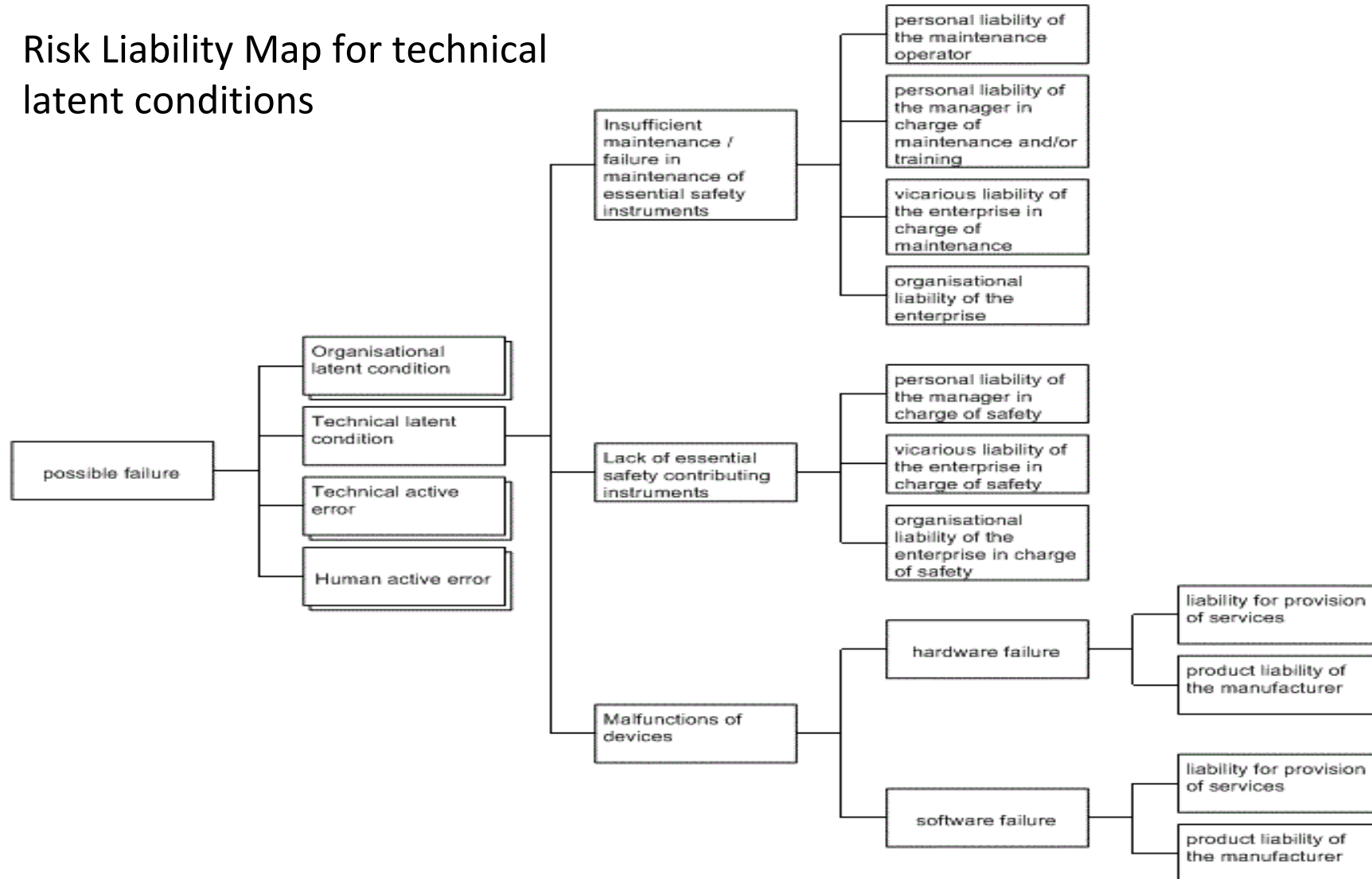


Step 2 (Identify the Liability Issues): **Legal Risks and Legal Analysis Maps**

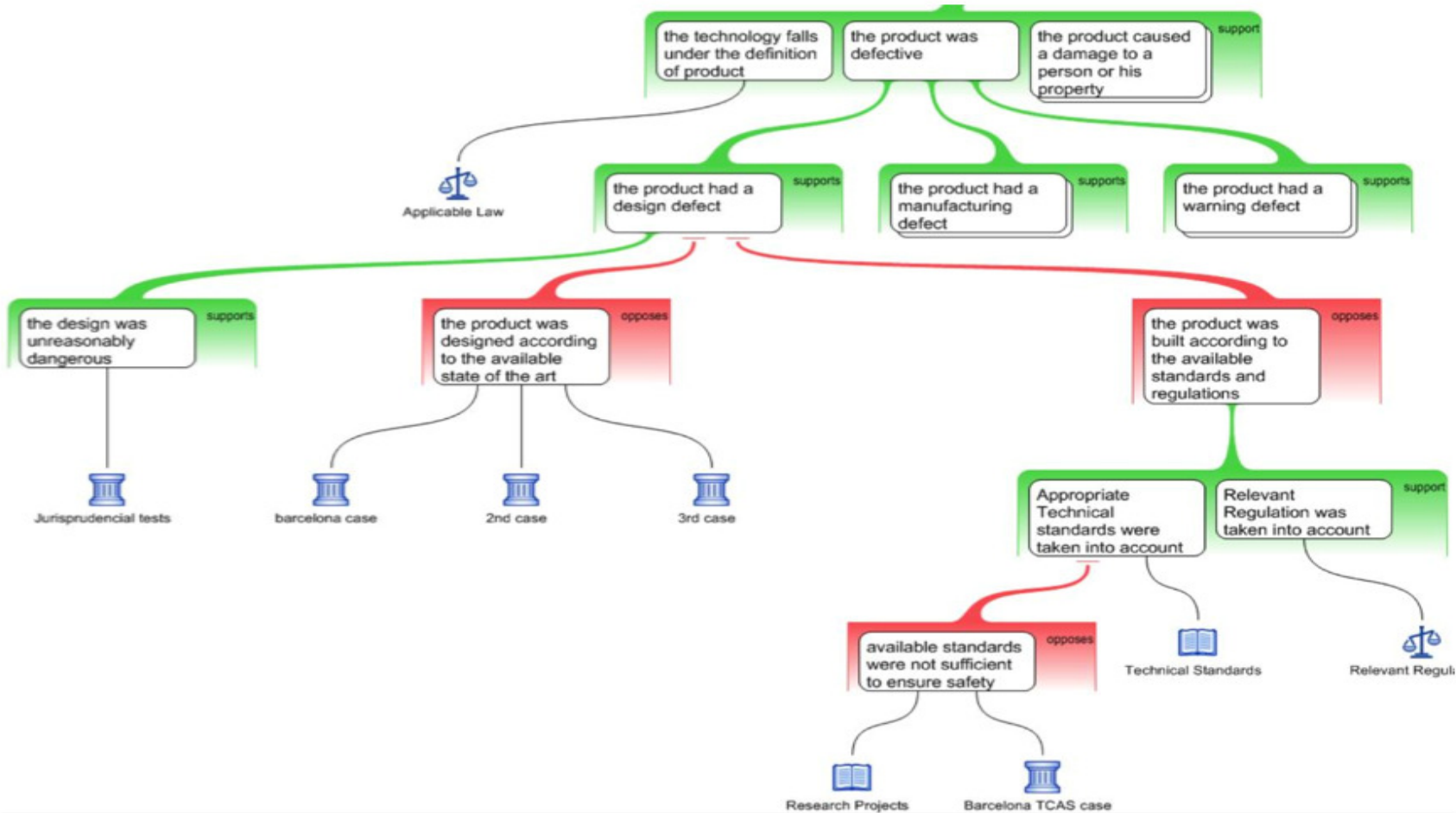
- Liability risks associated with possible failures are identified through **risk-liability and damage-liability maps**;
- Liability risks are assessed through **legal-analysis maps**, according to existing laws and contractual arrangements.

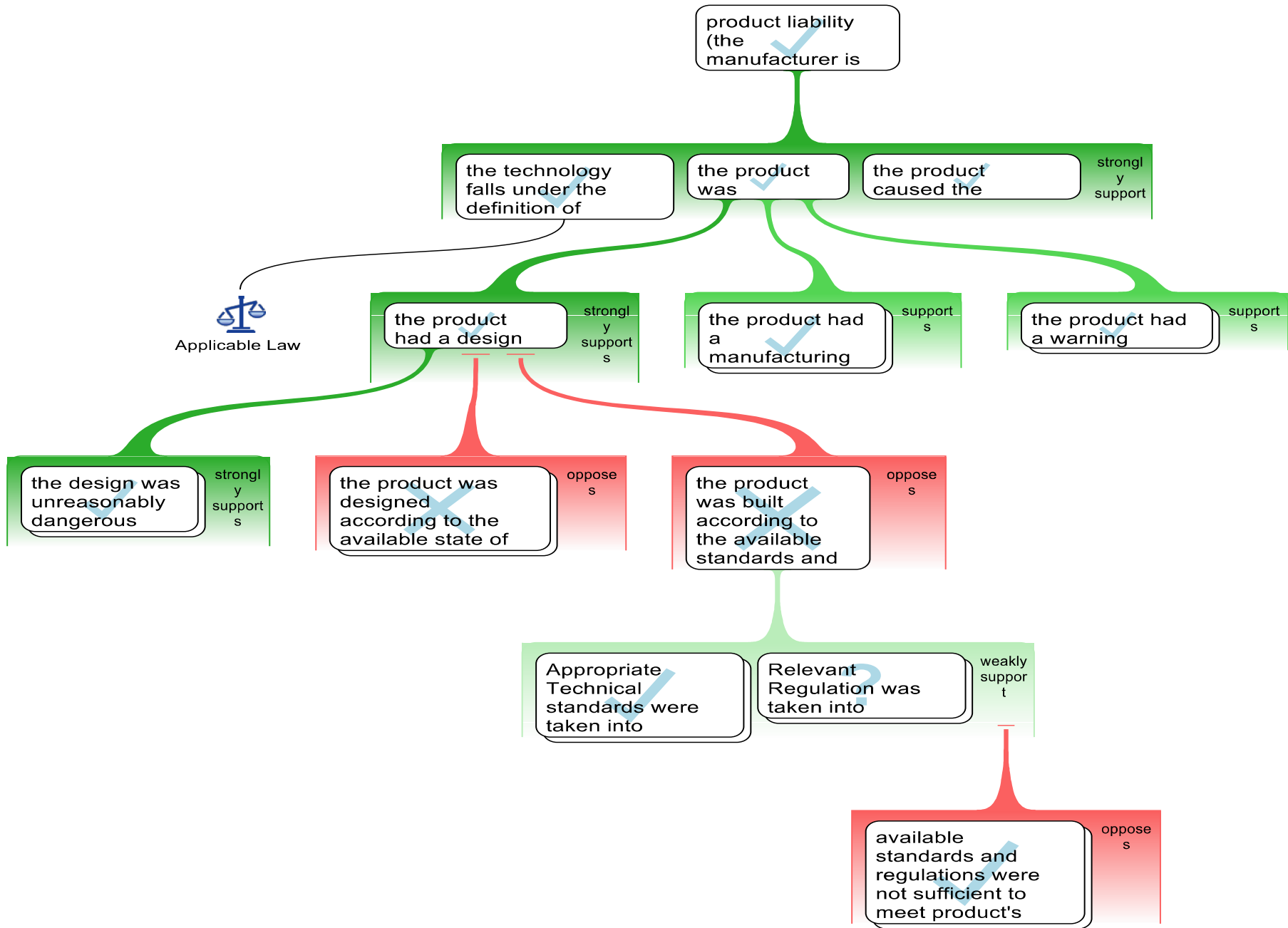
Step 2: Legal Risk Maps

Risk Liability Map for technical latent conditions



STEP 2: Legal Analysis Map on product liability





Step 3 (perform the legal analysis):

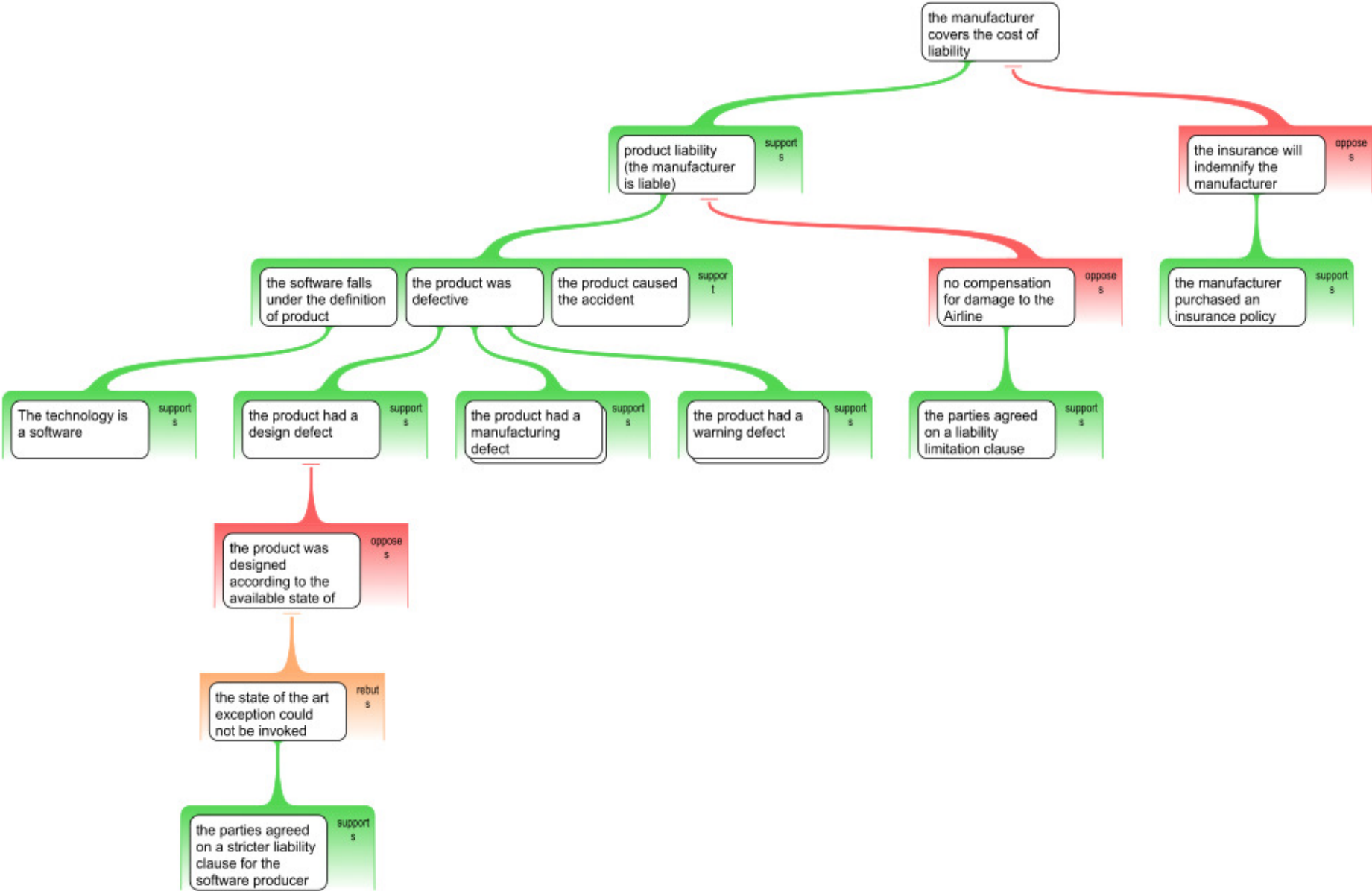
Legal Design Maps

Legal Design measures are proposals on possible mitigation and recommendations for the design of a system and can take form of private (contractual) legal agreements, which can be:

1. Liability **mitigating**
2. Liability **enhancing**
3. Liability **displacing**

Maps are used here **to design and validate these measures** so as to find the best way to allocate liabilities among the stakeholders.

Step 3: Legal Design Map on Software Liability





- Link the maps to source materials
- Cover more legal topics
- Make maps more interactive (online)
- Enable the users to change maps and add new arguments, personal notes, ... (Carneades, OVA)
- Introduce automatic assessment of argument status

**THANK YOU FOR YOUR
ATTENTION.**

ANY QUESTIONS?

MORE ABOUT ALIAS PROJECT AT
WWW.ALIASNETWORK.EU

