

Network safety

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Safety culture – what does it mean?

- Organisations (or other closely collaborating groups of actors) tend to develop shared ways of thinking and feeling about safety and ways to acting towards it – whether they notice it or not
- *Safety culture* is a concept which aims to grasp this phenomenon; the overall, underlying logics of an organisation with respect to safety
- Safety culture is a group-level phenomenon, not a characteristic of an individual worker. However, culture affects the behaviors of individuals. It is not natural for an individual to work against the norms of the organisation or the working group.
- Safety culture should not be mystified too much: the implications and manifestations of safety culture of an organisation are visible and concrete, for example:
 - Sufficient vs. insufficient time and human resources for carrying out the work with proper quality
 - Willingness to put effort in solving technical problems that may have safety consequences just to be on a safe side vs. focusing solely on tasks which are important for schedule or explicitly required by regulator

Safety culture – where does it come from?

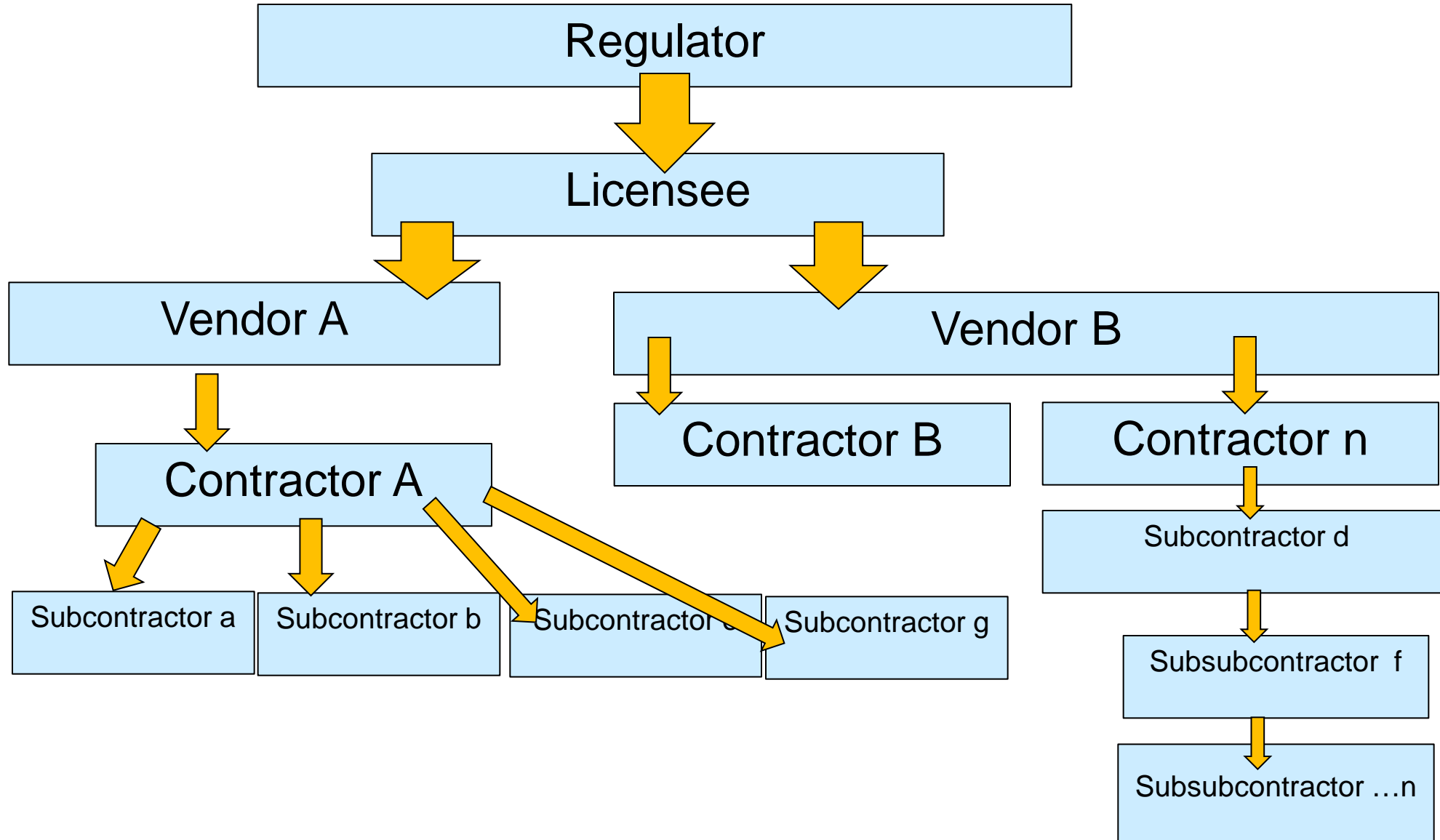
- Development of safety culture is largely subconscious and it takes place gradually all the time
- From the very beginning of a nuclear project **the daily activities** lay foundations for the way people start to think, feel and act with respect to safety. Examples of such daily situations are:
 - Decisions concerning time schedules
 - The way of talking about regulatory requirements
 - Focus of attention in cost-quality goal-conflict situation
 - Requiring people with technical competence vs. acquaintance
 - Organising interdisciplinary vs. specialized work groups
 - Reactions towards questioning attitudes in the meetings
- Management plays a pivotal role for the development of safety culture
- However, shop floor workers and local leaders influence the development of local safety culture. The local interpretations and practices around safety issues are inevitable. The managers need to be aware of them.

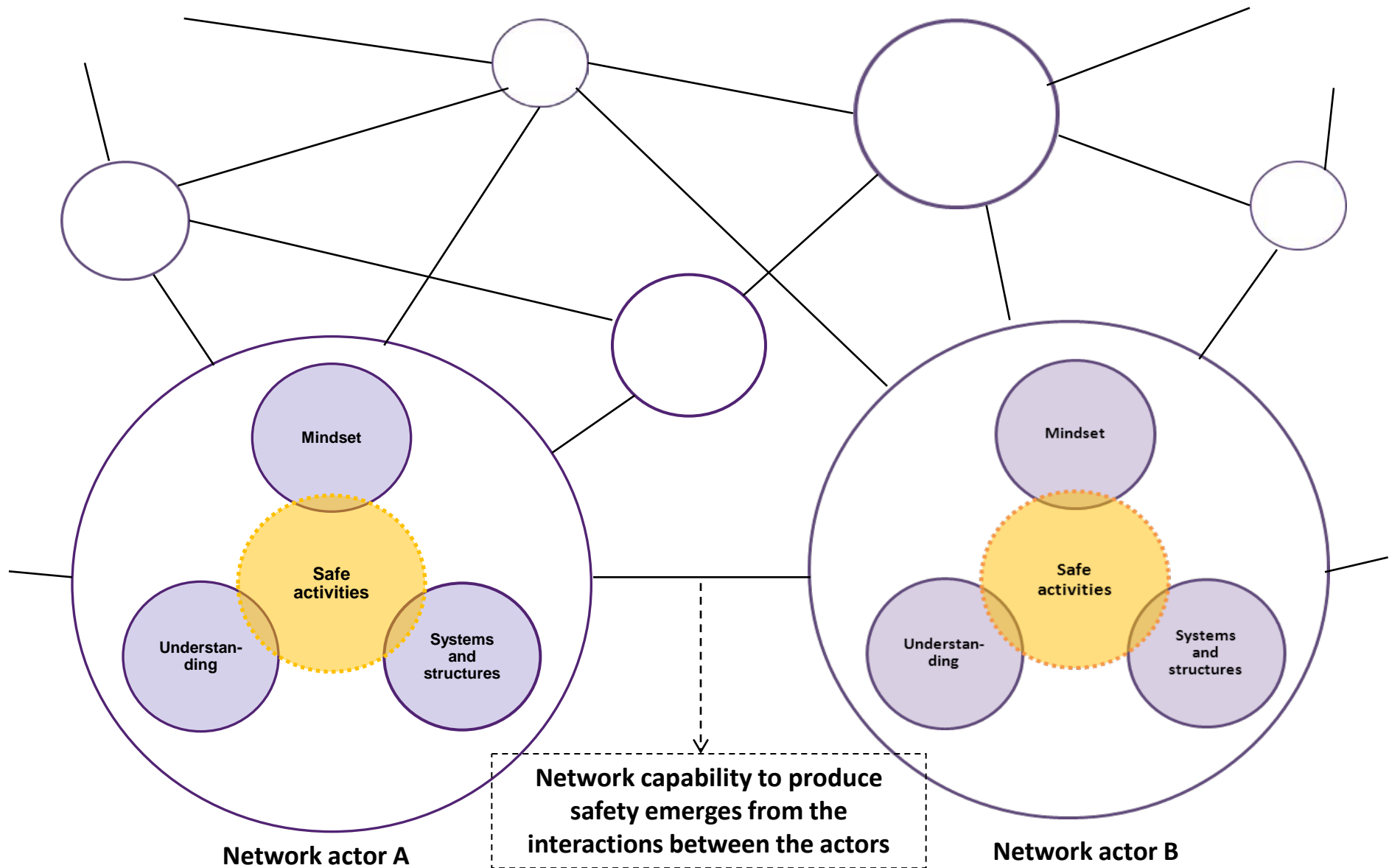
**Can a network of organisations e.g. a supply chain
develop a shared safety culture?**

The concept of network safety culture

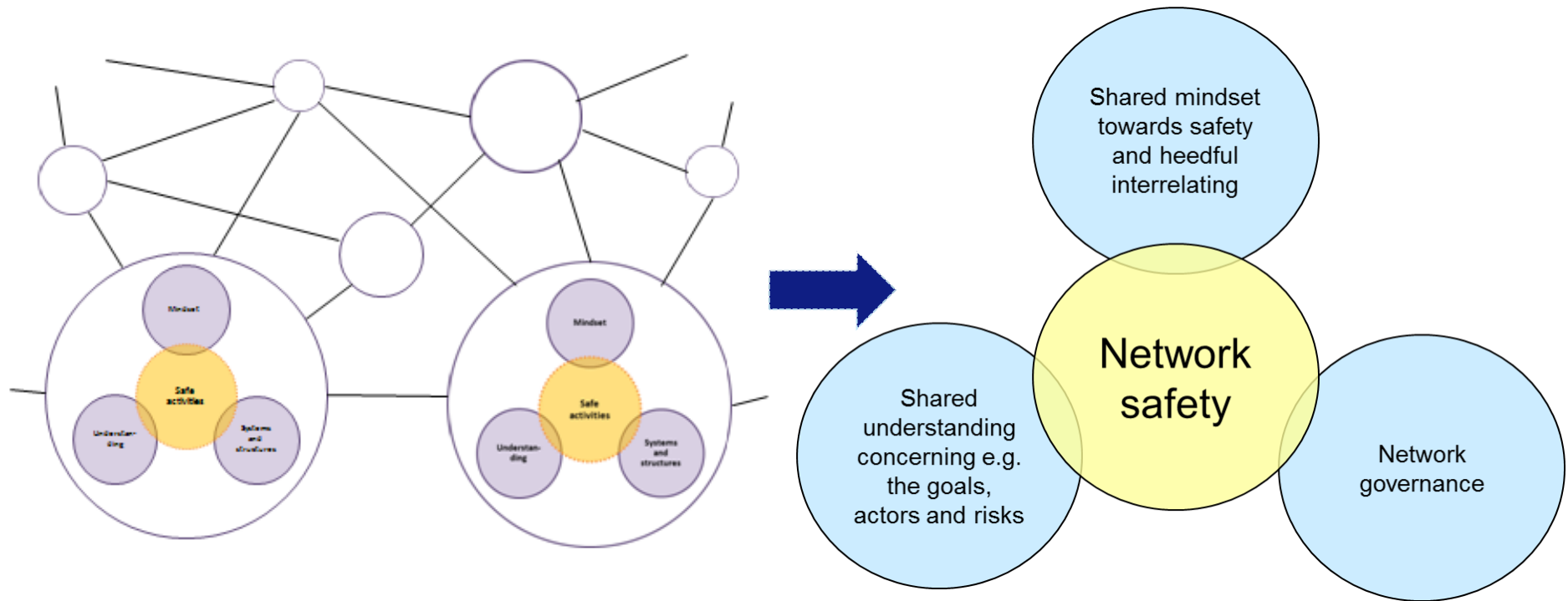
- In principle the concept of safety culture applies to networks - ***the network forms a temporary organisation***, even though it consists of multiple companies with workers from variety of professional and cultural backgrounds
- The temporary network organisation may gradually develop shared ways of thinking, feeling and acting, thus it creates a culture
- New ways of thinking and acting grow gradually as the network actors learns to understand each other
- However, if there is little direct communication and collaboration the culture remains superficial; the different organisations may share espoused goals and practices but not necessarily values, norms and understanding

Is the network safety culture created and managed like this?



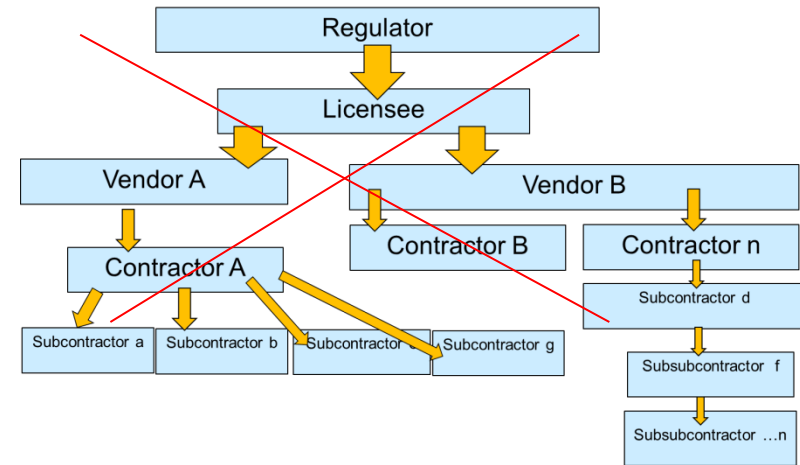


The emergence of network safety (modified from Gotcheva et al. 2012)



Network safety culture does NOT mean that...

- ...that safety culture can be “implemented” hierarchically in the supply chain through one-to-one contracts and requirements
- ... that the shared safety culture would eliminate local company cultures and the characteristics of national culture
- ... that only individuals (who participate in the project) need to change their behaviours to match the shared culture and that their company can keep out of the network safety culture



Network safety culture requires ...

- ... *Network governance* approach, paying attention to the overall network of actors, instead of focusing solely one-to-one interactions
- ... *commercial contracts* which allow some type of interventions e.g. audits and assessments in the various organisations
- ... *learning* from other stakeholders, engagement in shared development of safety culture principles and approaches
- ... *shared understanding* of the overall goals, constraints, risks
- ... *polycentric control*, appreciation of the fact that the principal contractor cannot control all the developments throughout the activities in the network. A network will have multiple interrelated centres, which have *partial autonomy* to make decisions and *partial responsibility* in achieving a *shared goal*
- ... *trust*
- ... *resources* (time and communication forums) for building shared understanding

Management of a complex network requires *both* seeing the network as one entity AND as a collection of partially autonomous components

Additional reading

- Gotcheva, N., Oedewald, P., Reiman, T. & Pietikäinen, E. (2012). Enhancing network safety through network governance, shared understanding and interfirm heedfulness. In Proceedings of the PSAM11 & ESREL 2012, June 25-29, Helsinki, Finland.



Thank You!