

Building Critical Infrastructure resilience capacities into the Emergency Management set-up: a reference framework - DTU Orbit (08/11/2017)

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Improving the resilience capacities required to manage Critical Infrastructure (CI) disruptions includes also enhancement of current Emergency Management practices. Our approach aims to integrate CI-specific issues into the EM setup (prevention, mitigation, response, and recovery). This paper proposes a comprehensive framework to identify, build and enhance specific capabilities, both intra- and inter-organisational, needed to manage (prepare, cope and recover from) CI disruptions. This allows emergency services to assess and explicitly address resilience improvement measures while planning to cope with CI disruptions. To operationalise this approach we have developed a hierarchical taxonomy that classifies system resilience capabilities at both technological and organisational level in each single organisation (CI operator or responder). Capabilities are defined as a combination of assets, resources and processes specifically arranged to accomplish a critical task and assure a key objective. Each capability contributes to one or more resilience capacities (preventive, absorptive, adaptive and restorative). An overall resilience capability building cycle completes the framework, enabling a systematic implementation of relevant capabilities and making gap analysis with regard to resilience deficits. The planning of training exercises to enhance CI resilience can also benefit from the approach.

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