Rearticulating Return of experience:

Towards a participatory and flexible REX Information Infrastructure for safety and security management

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Our *technological cultures* are increasingly confronted with natural catastrophes, industrial disasters, intentional unlawful acts, or a combination of these elements. Information Infrastructures dedicated to manage post-crisis are key elements to cope with these new risks and the challenges and threats they pose. A system, called REX (for return of experience), aims, in principles, on the one hand at engaging users (crisis actors) through “collective learning processes” and on the other hand, at drawing teachings from previous crises and getting prepared for future ones. Such information infrastructures have been institutionalized and systematized in various high-risk industries (e.g. aviation industry, hospitals, nuclear research) as well as at the national scale for safety and security-related crises in order to increase reflective practices and stimulate a learning process. In Belgium, as elsewhere, several crisis management actors regularly call for the establishment of such an information infrastructure. But how can this system be implemented and “made to work”?

Leaning on literature and existing REX examination, we highlight REX potential pitfalls caused by linear, top-down and technocratic approaches. Thereafter, through interviews and emergency exercises participatory observations we analyze the Belgian potential users’ (police, fire and medical services and political/administrative authorities) representations and practices. Based on this, we suggest and discuss an alternative REX model dealing with such pitfalls. The proposed REX builds on a bottom-up, flexible and non-linear approach that rearticulates the relationship between its designers (REX producers) and users (crisis actors) by engaging crisis actors in its production. Thereby, the project aims to produce robust and reflective conclusions and recommendations in order to improve our technological systems*’* resilience.