Technology commitment for intelligent systems in control centers, situation centers and emergency services

Christian Elsenbast, Fraunhofer IESE, Kaiserslautern, Germany

Notice: The following questionnaire is a modification of the short scale Technology Commitment according to Neyer et al.: *Neyer FJ, Felber J, Gebhardt C. Entwicklung und Validierung einer Kurzskala zur Erfassung von Technikbereitschaft. Diagnostica.* 2012;58(2):87-99. doi:10.1026/0012-1924/a000067.

The aim is to provide English-speaking readers with insight into the issues developed. These questions are only a translation of the German questionnaire and are <u>not validated in English</u>. It is therefore strongly recommended to revise the language with subsequent pretesting.

Introduction for test persons: Artificial intelligence (AI) can support control centers and situation centers in systematic networking and facilitate the exchange of information between control centers and authorized third parties via a platform or a so-called "digital ecosystem. "digital ecosystem" to simplify the exchange of information between control centers, situation centers, emergency forces and authorized third parties. With SPELL, relevant information from previously distributed sources is to be brought together so that it can be analyzed and processed with appropriate AI applications. SPELL stands for "Semantic Platform for Intelligent Decision and Operation Support in Control Centers and Situation Management". The basis of the developments are so-called semantic technologies, which can understand the meaning and correlations of data, give them a meaning and thus make them usable for intelligent links. AI services to be developed in SPELL can provide a basis for decision-making in complex situations by providing a central collection of all relevant information for a meaningful situation picture and networking of all parties involved. Some information can also be used to simulate the further course of complex situations and crises, to establish improved pre-warning systems, or to provide the operational experts (control center dispatchers) in large-scale emergencies. In addition, SPELL is intended to create a sustainable platform on the basis of which further developments can take place.

| Technology commitment | | | | | | | | |
|---|-------------|--------|-----------|------|--------|------------|--|--|
| | not true at | agrees | partially | is | fairly | is | | |
| | all | little | true | true | | completely | | |
| | | | | | | true | | |
| Regarding new developments in the | | | | | | | | |
| field of AI, I am very curious. | | | | | | | | |
| I quickly take a liking to technical | | | | | | | | |
| developments that support me or | | | | | | | | |
| other people intelligently. | | | | | | | | |
| I am always interested in new | | | | | | | | |
| developments in the field of AI. | | | | | | | | |
| If I had the opportunity, I would use AI- | | | | | | | | |
| based applications much more often. | | | | | | | | |
| Technology competence beliefs | | | | | | | | |

Table 1: Questionnaire

| When I think about using AI in my field | | | | |
|--|---|---|---|--|
| of work in the near future, I am often | | | | |
| afraid of failing. | | | | |
| For me, the professional handling of | | | | |
| innovations in the field of AI is mostly | | | | |
| an overwhelming challenge. | | | | |
| In my work, I'm afraid of doing harm | | | | |
| with AI applications rather than using | | | | |
| them properly. | | | | |
| I find dealing with AI in the workplace | | | | |
| difficult - I just can't do it most of the | | | | |
| time. | | | | |
| Technology control beliefs | - | - | - | |
| Whether I am successful in the | | | | |
| application of AI developments used in | | | | |
| the future depends largely on me. | | | | |
| It's up to me whether I succeed in using | | | | |
| AI applications - it has little to do with | | | | |
| chance or luck. | | | | |
| If I have difficulties in dealing with AI | | | | |
| applications, it ultimately depends on | | | | |
| me alone to solve them. | | | | |
| What happens when I engage with AI | | | | |
| applications deployed in the future is | | | | |
| ultimately in my control. | | | | |