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Systematic mitigation of model sensitivity in the initiation phase of energy projects

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ABSTRACT

Early project risk identification and assessment is a complex issue based on decision-making methods that are methodically suitable for successful project delivery. Nevertheless, although there are several risk management assessment tools, in practice, this issue is still not taken seriously enough in the project initiation phase. Literature research reveals a need for an applicable systematic risk model approach, systematic sensitivity of mitigation action plans, considering the need for early systematic project risk awareness. This paper not only explains the evidence that a risk systematic model tool is essential in the project initiation phase but also narrows the gaps through the systematic sensitivity approach with the accent on the integrated risk systematic model. The sensitivity approach is taken in the project early preparation phase, where evaluation, the establishment of limits to which risks are controllable, is based on the stage-gate model. The stage-gate model evaluates which risks are specific to a certain analysis in the early project definition phase, leads to the conclusion that excluding any mitigation elements or probability of risk occurrence reflects on the outcomes, and presents an unrealistic picture of the given project targets. This research represents a reliable risk tool with improvements in resolving systematic risk system faults, 'stakeholders' subjective decision gaps, constricting project contingency, and shortening project schedule deviation. The research is based on two complex industry (case studies) projects within the energy industry.

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Izvirni znanstveni članek

Sistematična ublažitev občutljivosti modela v začetni fazi energetskih projektov

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POVZETEK

Zgodnje prepoznavanje in ocenjevanje projektnih tveganj je zapleteno vprašanje, ki temelji na metodah odločanja, ki so metodično primerne za uspešno izvedbo projektov. Kljub temu, da obstaja več orodij za ocenjevanje obvladovanja tveganj, to vprašanje v praksi v fazi začetka projekta še vedno ni dovolj resno obravnavano. Pregled literature razkriva potrebo po uporabi sistematičnega pristopa k modelu tveganj, sistematičnega vrednotenja občutljivosti blažilnih akcijskih načrtov, ob upoštevanju potrebe po zgodnji sistematični ozaveščenosti o projektnih tveganjih. Ta članek ne samo pojasnjuje dokaze, da je orodje sistematičnega modela tveganja bistvenega pomena v fazi začetka projekta, temveč tudi zmanjšuje vrzeli s pristopom sistematičnega vrednotenja občutljivosti s poudarkom na integriranem sistematičnem modelu tveganj. Pristop občutljivosti je uporabljen v zgodnji fazi priprave projekta, kjer vrednotenje, določitev meja, do katerih je mogoče nadzorovati tveganja, temelji na modelu faznih vrat (angl. stage-gate). Model faznih vrat ocenjuje katera tveganja so značilna za določeno analizo v zgodnji fazi opredelitve projekta, vodi do zaključka, da izključitev kakršnih koli omilitvenih elementov ali verjetnosti pojava tveganja vpliva na rezultate, in predstavlja nerealistično sliko danih ciljev projekta. Ta raziskava zagotavlja zanesljivo orodje obvladovanja tveganj, ki omogoča izboljšave na področju odpravljanja sistematičnih napak v sistemu tveganj, odpravlja subjektivne vrzeli pri odločanju zainteresiranih strani, omejuje nepredvidljive dogodke projekta in skrajša odstopanja od časovnice projekta. Raziskava temelji na dveh kompleksnih industrijskih projektih (študiji primera) v elektroenergetski industriji.

PODATKI O ČLANKU

Ključne besede:
Obvladovanje projektnega tveganja;
Model tveganja;
Analiza tveganja;
Zmanjšanje tveganja;
Model občutljivosti;
Zainteresirane strani;
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