

Type of activity: ☒ railway undertaking ☐ infrastructure manager

	Result of the evaluation							
	0	1	2	3	4	5	6	7
X – Process safety	No, the company does not use any solutions in the field of the digital economy	The company uses simple solutions in the field of the digital economy – basic software supporting processes, e.g., Excel	The company uses simple solutions in the field of the digital economy – basic software supporting processes	The company uses simple solutions in the field of the digital economy – basic software supporting processes but supported by data sets – BIG DATA	The company uses digital economy solutions – advanced software supporting processes supported by data sets – BIG DATA and simulators for knowledge development and process monitoring, and stores data in cloud computing	The company uses advanced digital economy solutions – advanced software supporting processes supported by cybersecurity solutions and interface management, as well as BIG DATA, simulation concepts and simulation tests for several continuous errors during several operator changes	The company uses advanced digital economy solutions based mainly on cybersecurity solutions and interface management, as well as BIG DATA, simulation concepts as well as system integration within the SoS concept, taking into account configuration management and simulation tests for several continuous errors during several operator changes	The company uses advanced digital economy solutions in the area of the Industry 4.0 concept such as: Industrial Intranet of Things (IIoT) • Big Data • Horizonal and vertical system integration • Simulation • Clouds • Extended Reality • Autonomous robots • 3D print • Cybersecurity And also concepts such as: • Digital twin

								<ul style="list-style-type: none"> • Interface Management • Simulation tests for several continuous errors during several operator changes and other advanced solutions
1. Does the company monitor the system life cycle using digital solutions? If so, to what extent?								
2. Does the company support the process of technical risk management using digital solutions? If so, to what extent?								
3. Does the company monitor functional safety using digital solutions? If so, to what extent?								
4. Does the company identify the risks of digital solutions? If so, to what extent?								
5. Does the company manage information on process safety using digital solutions? If so, to what extent?								
6. Does the company report on process safety using digital solutions? If so, to what extent?								
7. Does the company develop plans and programs to prevent accidents using digital solutions? If so, to what extent?								
8. Does the company assess risks to safety-critical facilities using digital solutions? If so, to what extent?								
9. Does the company use process risk assessment methods with proposed technical and organizational safeguards and risk control measures using digital solutions? If so, to what extent?								
10. Does the company manage processes related to technical rescue using digital solutions? If so, to what extent?								

Y – Occupational health and safety	Result of the evaluation							
	0	1	2	3	4	5	6	7
	No, the company does not	The company uses simple solutions in	The company uses simple	The company uses simple solutions in	The company uses digital	The company uses advanced	The company uses advanced digital	The company uses advanced digital economy solutions in the

The digital economy – basic software supporting processes, e.g., Excel	use any so-	the field of	solutions in	the field of	economy so-	digital	economy solu-	area of the Industry
	lutions in	the digital	the field of	the digital	lutions – ad-	economy	tions based	4.0 concept such as:
	the field of	economy –	the digital	economy –	vanced soft-	solutions	mainly on cy-	Industrial
	the digital	basic soft-	economy –	basic soft-	ware sup-	based	bersecurity so-	Intranet of Things
	economy	ware sup-	basic soft-	ware sup-	porting pro-	mainly on	lutions and in-	(IIoT)
		porting pro-	ware sup-	porting pro-	cesses sup-	cybersecu-	terface man-	
		cesses, e.g.,	porting pro-	cesses but	ported by	rity solu-	agement, as	• Big Data
		Excel	cesses but	supported by	data sets –	tions and	well as BIG	• Horizon-
			supported	data sets –	BIG DATA	interface	DATA, simula-	l and vertical system
			by data sets	BIG DATA	and simula-	manage-	tors and basic	integration
			– BIG	and simula-	tors for	ment, as	process auto-	• Simula-
			DATA	tors for	knowledge	well as	mation con-	tion
				knowledge	develop-	BIG	cepts as well as	
				development	ment and	DATA,	system inte-	• Clouds
				and process	process	simulators	gration within	• Extended
				monitoring	monitoring,	and basic	the SoS con-	Reality
					and stores	process	cept, taking	
					data in	automa-	into account	• Autono-
					cloud com-	tion con-	configuration	mous robots
					puting	cepts	management	
						and simulation	• 3D print	
						tests for sev-	• Cyberse-	
						eral continu-	curity	
						ous errors dur-	And also concepts	
						ing several op-	such as:	
						erator changes		
							• Digital	
							twin	
							• Interface Manage-	
							ment	
							• Simulation tests for	
							everal continuous er-	
							rors during several	
							operator changes and	
							other advanced solu-	
							tions	

1. Does the company monitor the needs of employees and other stakeholders using digital solutions? If so, to what extent?								
2. Does the company support leadership in the field of safety at work using digital solutions? If so, to what extent?								
3. Does the company monitor occupational risks using digital solutions? If so, to what extent?								
4. Does the company consult employees on work safety issues using digital solutions? If so, to what extent?								
5. Does the company monitor dangerous situations in safety-critical processes using digital solutions? If so, to what extent?								
6. Does the company monitor employee behavior using digital solutions? If so, to what extent?								
7. Does the company monitor communication processes in the organization using digital solutions? If so, to what extent?								
8. Does the company manage change using digital solutions? If so, to what extent?								
9. Is the company ready and responsive to emergencies using digital solutions? If so, to what extent?								
10. Does the company monitor a culture of safe work using digital solutions? If so, to what extent?								

	Result of the evaluation							
	0	1	2	3	4	5	6	7
Z – Human and organizational factors — HSIs (human-system-interfaces)	No, the company does not use any solutions in the field of the digital economy	The company uses simple solutions in the field of the digital economy – basic software supporting	The company uses simple solutions in the field of the digital economy – basic software supporting	The company uses simple solutions in the field of the digital economy – basic software supporting processes but	The company uses simple solutions in the field of the digital economy – advanced software supporting processes supported by	The company uses advanced digital economy solutions in the field of the digital economy – advanced digital solutions mainly on cybersecurity	The company uses advanced digital economy solutions in the field of the digital economy – digital economy based mainly on cybersecurity management, as well as BIG	The company uses advanced digital economy solutions in the area of the Industry 4.0 concept such as: Industrial Intranet of Things (IIoT)

		processes, e.g., Excel	processes but sup- ported by data sets – BIG DATA	supported by data sets – BIG DATA and simula- tors for knowledge development and process monitoring	data sets – BIG DATA and simula- tors for knowledge develop- ment and process monitoring, and stores data in cloud com- puting	solutions and inter- face man- agement, as well as BIG DATA, simulators and basic process automa- tion con- cepts	DATA, simula- tors and basic process auto- mation con- cepts as well as system integra- tion within the SoS concept, taking into ac- count configu- ration manage- ment and sim- ulation tests for several contin- uous errors during several operator changes	<ul style="list-style-type: none"> • Big Data • Horizon- tal and vertical sys- tem integration • Simula- tion • Clouds • Extended Reality • Autono- mous robots • 3D print • Cyberse- curity <p>And also concepts such as:</p> <ul style="list-style-type: none"> • Digital twin • Interface Manage- ment • Simulation tests for several contin- uous errors during several operator changes and other advanced solutions
1. Does the company monitor human errors using digital solutions? If so, to what extent?								
2. Does the company identify and monitor interfaces – Human-System Interfaces using digital solutions? If so, to what extent?								
3. Does the company manage the competences of personnel performing safety-critical tasks using digital solutions? If so, to what extent?								

4. Does the company monitor human limitations using digital solutions? If so, to what extent?								
5. Does the company identify and monitor risks associated with the construction and use of equipment, tasks, and working conditions using digital solutions? If so, to what extent?								
6. Does the company monitor work ergonomics using digital solutions? If so, to what extent?								
7. Does the company monitor employee fatigue and related risks using digital solutions? If so, to what extent?								
8. Does the company ensure the expected physical and psychological capacity using digital solutions? If so, to what extent?								
9. Does the company take into account the integration of human and organizational factors in the process of change management using digital solutions? If so, to what extent?								
10. Does the company monitor the level of human reliability using digital solutions? If so, to what extent?								

	Result of the evaluation							
	0	1	2	3	4	5	6	7
T – Safety Management System	No, the company does not use any solutions in the field of the digital economy	The company uses simple solutions in the field of the digital economy – basic software supporting processes, e.g., Excel	The company uses simple solutions in the field of the digital economy – basic software supporting processes but supported by data sets	The company uses simple solutions in the field of the digital economy – basic software supporting processes but supported by data sets – BIG DATA and simulators for	The company uses digital solutions in the field of the digital economy – advanced software supporting processes supported by data sets – BIG DATA and simulators	The company uses advanced digital solutions in the field of the digital economy – advanced solutions based mainly on cybersecurity solutions and interface management, as well as BIG DATA, simulators and basic process automation	The company uses advanced digital economy solutions based mainly on cybersecurity solutions and interface management, as well as BIG DATA, simulators and basic process automation	he company uses advanced digital economy solutions in the area of the Industry 4.0 concept such as: • Industrial Intranet of Things (IIoT) • Big Data • Horizontal and vertical system integration

			– BIG DATA	knowledge development and process monitoring	for knowledge develop- ment and process monitoring, and stores data in cloud com- puting	as well as BIG DATA, simula- tors and basic pro- cess auto- mation concepts	concepts as well as system integration within the SoS concept, taking into account configuration management and simulation tests for several continuous er- rors during sev- eral operator changes	<ul style="list-style-type: none"> • Simula- tion • Clouds • Extended Reality • Autono- mous robots • 3D print • Cyberse- curity And also concepts such as: • Digital twin • Interface Manage- ment • Simulation tests for several continu- ous errors during several operator changes and other advanced solutions
1. Does the company create the management intentions of top managers and leadership in the field of safety using digital solutions? If so, to what extent?								
2. Does the company monitor safety policy and safety objectives using digital solutions? If so, to what extent?								
3. Does the company monitor operational, organizational and technical risks using digital solutions? If so, to what extent?								
4. Does the company build and monitor the awareness of human limitations in an organization using digital solutions? If so, to what extent?								

5. Does the company control the professional process of conduct within processes identified in the organization using digital solutions? If so, to what extent?								
6. Does the company monitor criteria for risk acceptance and safety measures using digital solutions? If so, to what extent?								
7. Does the company monitor risks associated with operational processes throughout the value chain using digital solutions? If so, to what extent?								
8. Does the company monitor the performance of partners and suppliers in the context of safety criteria using digital solutions? If so, to what extent?								
9. Does the company manage in crisis situations, monitoring these processes using digital solutions? If so, to what extent?								
10. Does the company monitor the conclusions from accidents and incidents using digital solutions? If so, to what extent?								