Principal Designer Working Group
Event No 25

Discovering Safety – BIM Construction Risk Library Project
Pav Singh, Arcadis

27th January 2022

highways england

Following Presentation by Gordon Crick of HSE

INTRO TO DISCOVERING SAFETY

DISCOVERING SAFETY

Delivering health and safety benefits through a data driven global community

- £10 million, 5-year (2017-2022) research programme funded by the Lloyd's Register Foundation
- Jointly delivered by the HSE and The University of Manchester through the recently established Thomas Ashton Institute

TAI Thomas Ashton Institute

Lloyd's Register Foundation

HSE

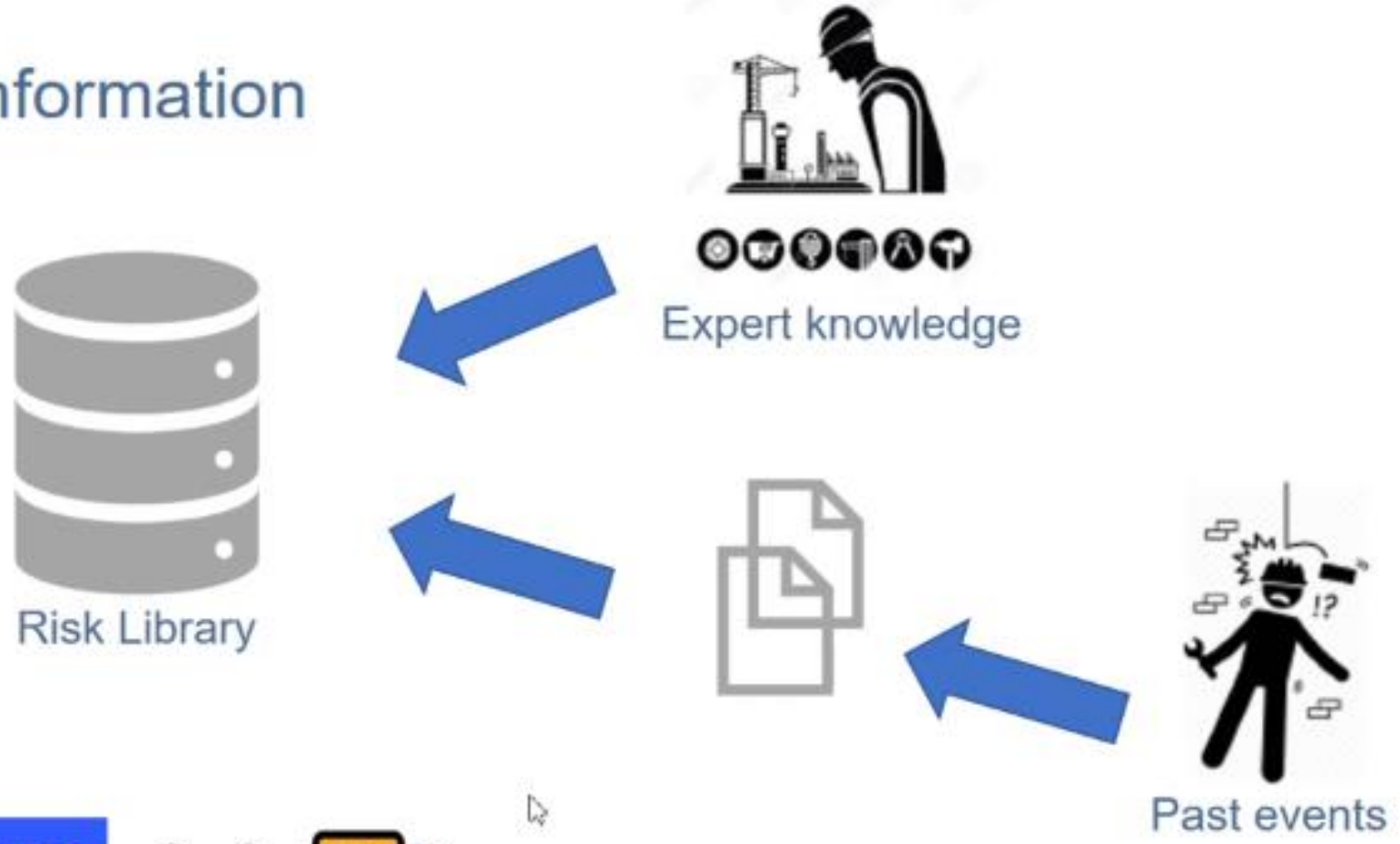
MANCHESTER 1824
The University of Manchester

SafetiBase

highways england

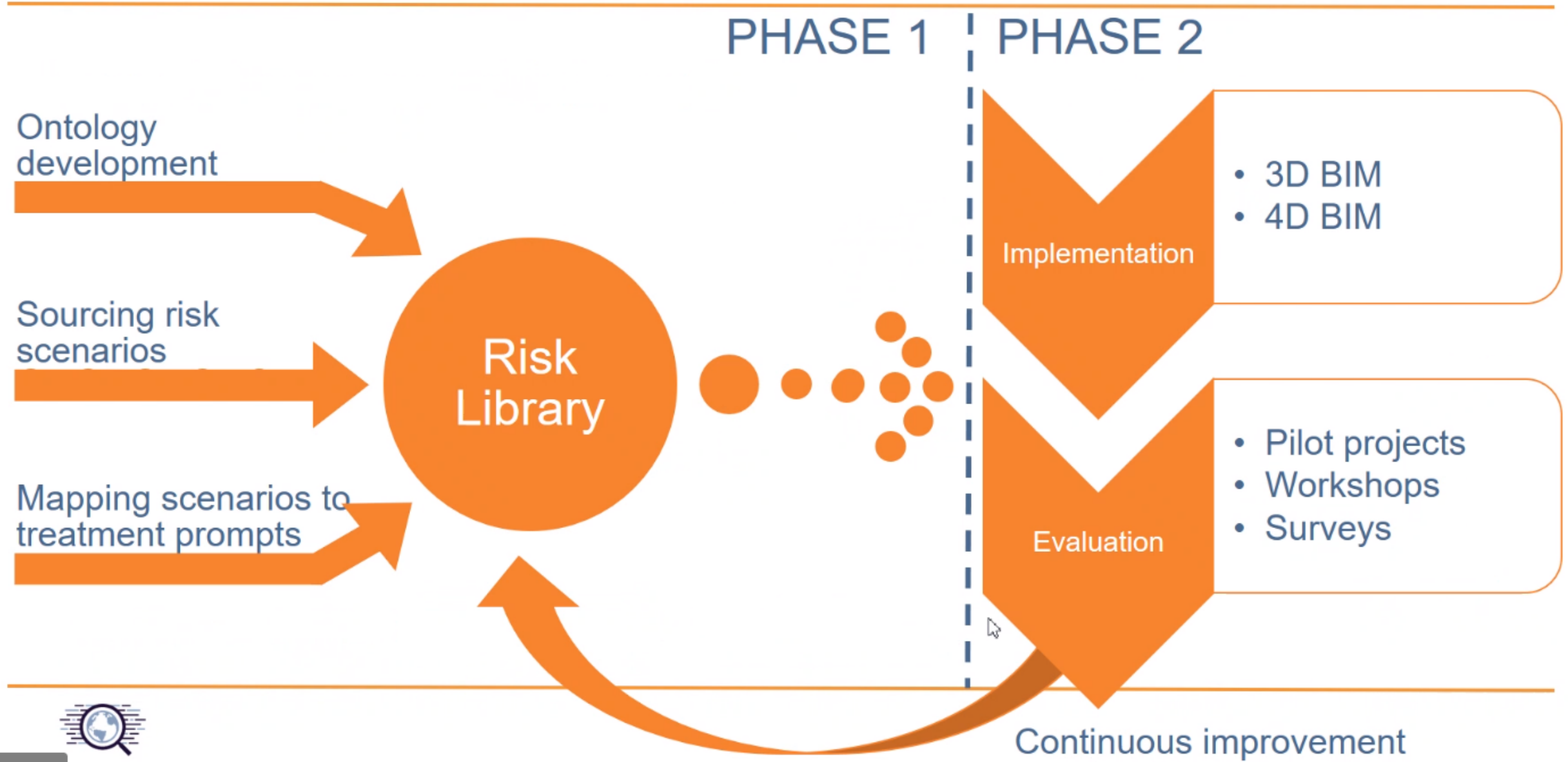
Background – Risk Library Project the issue

Issue: Disaggregated information

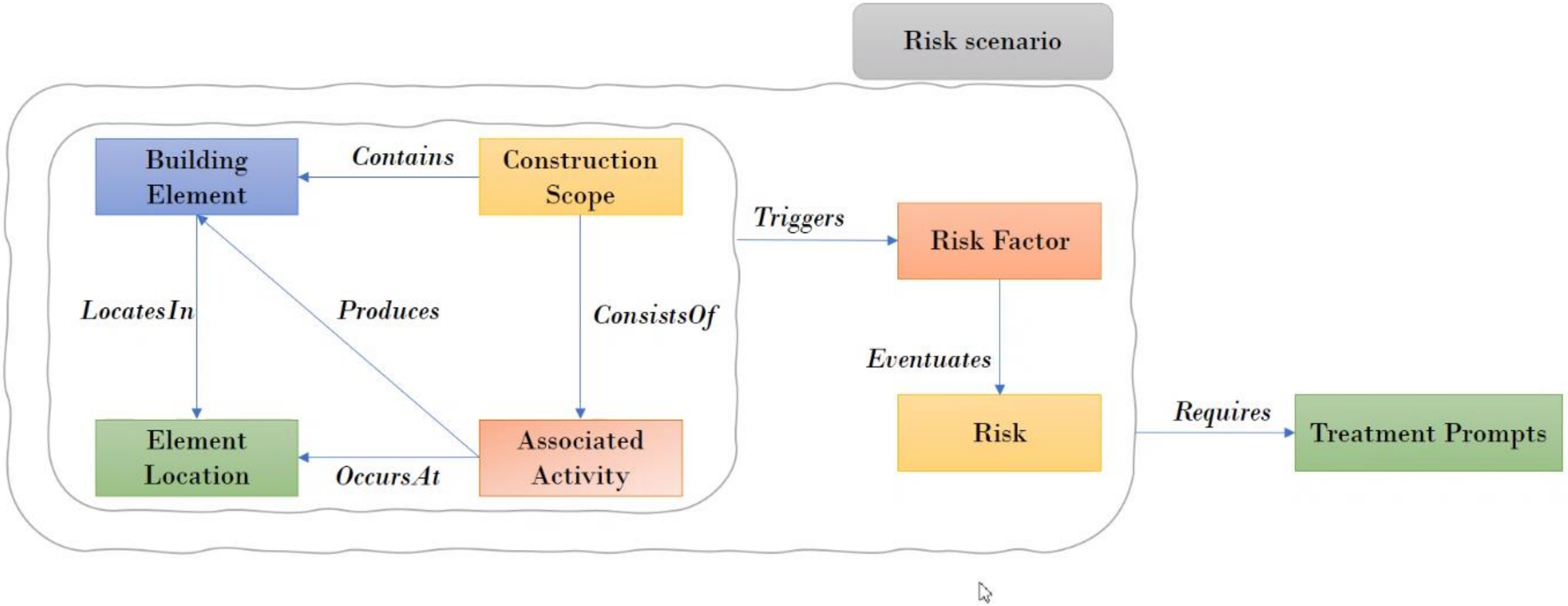


Implementation: 3D REPO SafetiBase

PROJECT DETAIL



RISK SCENARIO ONTOLOGY



TREATMENT MATRIX

Scenario	Risk	Construction scope
Lifecycle of the props	Struck-By falling object	Deep basements and shafts

Element	Location	Activity	Risk Factor
Temporary structure	Site logistics-Excavation area	Install construction	Physical-Collapse

	Eliminate	Reduce	Control by subsequent design	Inform
Preliminary Design	Consider another solution instead of excavation		Evaluate alternatives to using large props	Designer input into prop proposal
	Eliminate the need for props (e.g. reinforced ring beam)			Commision risk study to validate size, fixings and props needed
Detail Design	Test integrity of props for supporting load	Consider making the props part of the permanent works		Make sure there are permits to load to install and remove props agreed with temporary works
				Create a temporary works design brief covering installation risks
Pre construction			Detail plan to control risks in sequence of installation and removal	Provide risk information to prop installers and removers
				Make sure there is a lifting plan in place to remove the props safely
Site work, Temp Works, Change control		Monitoring props (e.g. using sensors)	Validating the installation as designed by testing fixings	Inspect the state of the props daily
			Avoid working in the area until the props are removed	

AIMS AND OBJECTIVES

Expand

Tool Evaluation

Pilot projects

3D REPO

SafetiBase

Qualitative research

qualtrics XM

Tool Development

Risk Library

HSE Archive Mobilisation

DISCOVERING SAFETY

Next Steps

- Construction Risk Library Project aims to standardise data and process that reduce or mitigate safety risks in construction.

- Join the Construction Risk library project – link provided
  - **Log in | Discovering Safety**
- Contact Dr William Collinge william.collinge@manchester.ac.uk or Gordon Crick gordon.crick@hse.gov.uk for more information

- Support the project by providing risks associated with Linear Highways and Infrastructure projects.
- Join the meetings to review risk and treatment identification.

Health and Safety
Executive

The Construction Risk Library – join our Community of Practice

See www.discoveringsafety.com

Sign up to membership on the web-site – ask to join the Risk Library Project

Gordon Crick, HSE

Zane Ulhaq, WS Atkins