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MODAL INTEGRATION
AT THE SERVICE OF GLOBAL DISTRIBUTION

26-28 JUNE 2018, GENOA, ITALY



Innovation and Digitalisation Exploiting Data

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Going beyond current limitations – Smart Assets



Smart trains

Communicate with each other and control room sharing location, speed and track conditions ahead.
Capable of autonomous operation.



Intelligent condition monitoring systems
Fitted with object identifications system and integrated with database and control room. Augmented reality capability.

Smart locomotives and wagons

Measure infrastructure and locomotive condition.



Real-time condition assessment systems

Monitor real time asset condition, communicates with trains and control room and integrated with condition monitoring systems for verification.



Smart infrastructure

Self aware, self diagnosing and communicates with trains and control room of track and locomotive condition.



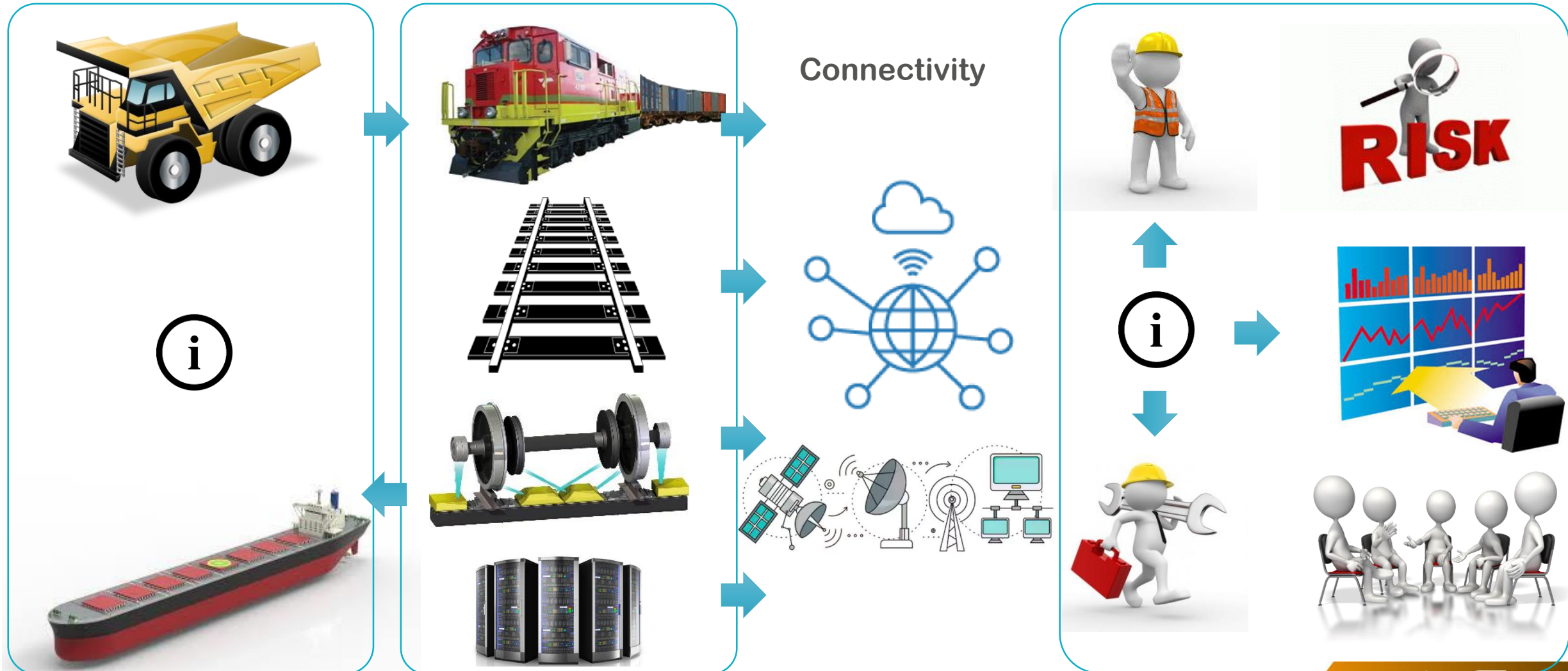


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Customer

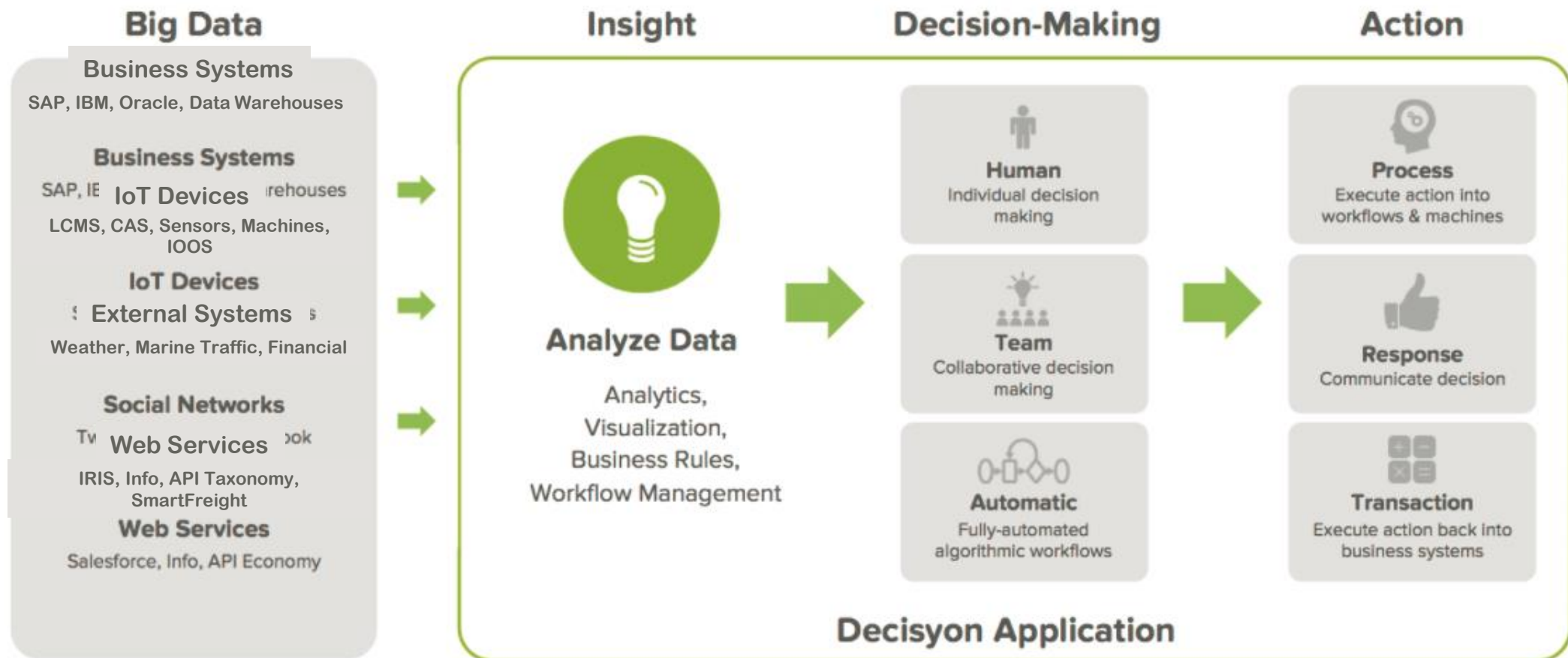
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People/Process





Aspirational Information Application

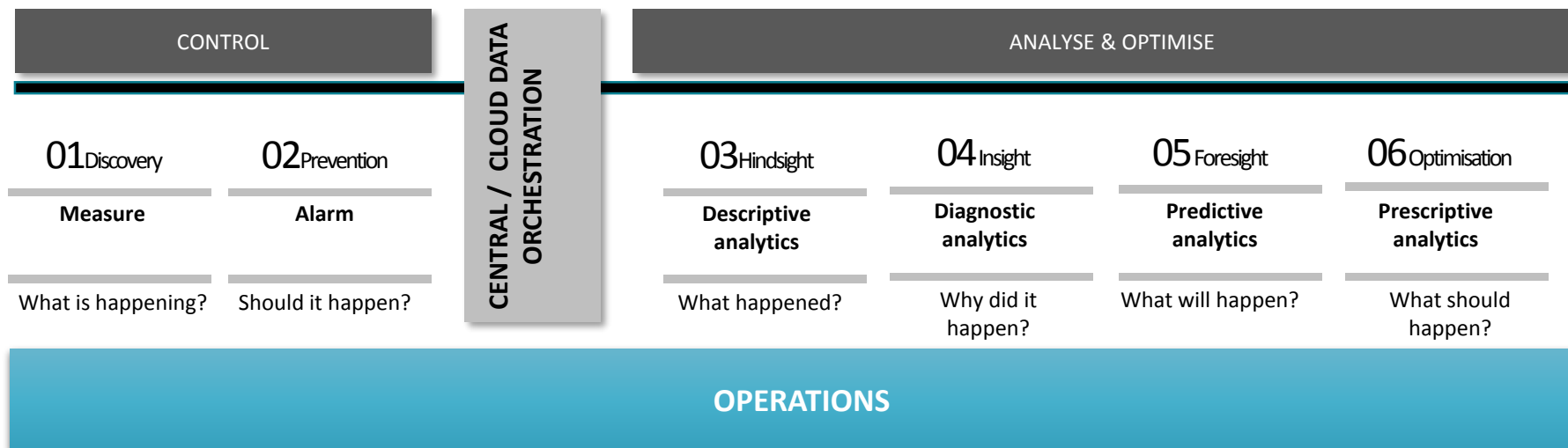




Aspirational Information Flow Model

Information systems should provide the intended recipient an accurate response to any of these questions:

- What is happening?
- Should it happen?
- What happened?
- Why did it happen?
- What will happen?
- What should happen?





Running Longer Trains – 4km/train – South African Iron Ore Train





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Computerized Driver Assistance for the Railway of the future Rio Tinto Australia – Successful Test of an Autonomous Train





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THEME: HEAVY HAUL 4.0
ACHIEVING BREAKTHROUGH PERFORMANCE LEVELS

International Heavy Haul Association Conference (IHHA)

12-14 June 2019
Narvik, Norway



**INTERNATIONAL
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THANK YOU