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# **Taking the Next Step: A Practical Guide to Leadership in OHS Ecosystems**

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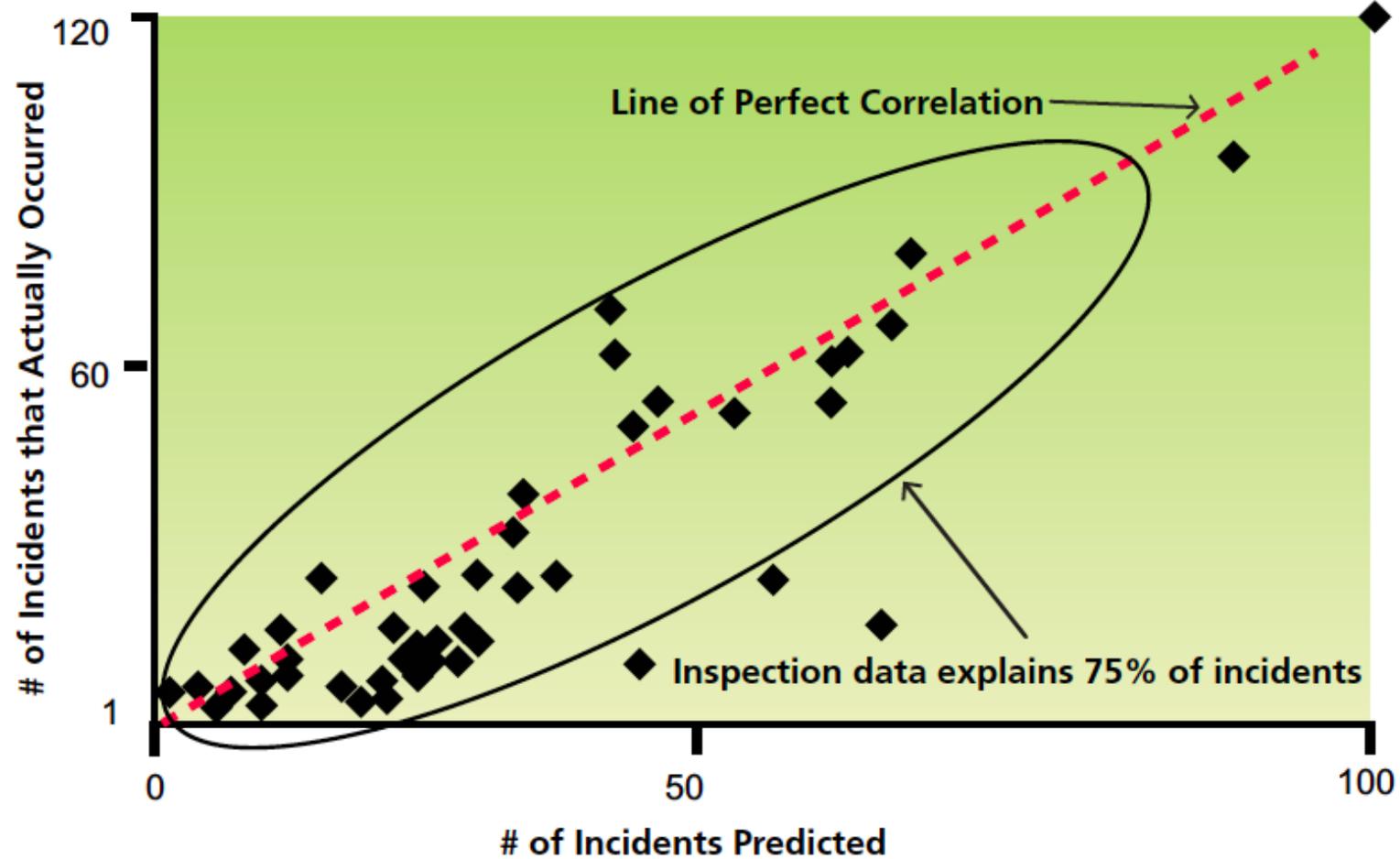


Figure 1 – Correlation of Predicted Versus Actual Incidents at a Worksite

- New models for OHS practice
- Importance of OHS Leadership
- Trends in Data and Analytics
- Benefits of Advanced Data Analytics
- Model of Organizational Analytics Capacity
- Conclusion

OHS Issue	Traditional View	Trend
Accountability	Bureaucratic up	Ethical down
Focus	Absence of negative	Presence of positives
Thought patterns	cause-effect, defenses in depth	complexity, change, evolution, holistic relationships
Vocabularies	control, constraint, human deficit	empowerment, diversity, human opportunity

“Research highlights the important role played by middle management. As noted above, senior management commitment to OHS leading indicator activity is critical, but there is a need for sustained safety leadership training programs for managers at all levels in order for them to understand their OHS roles and to learn to be safety leaders.”

Source: Sheehan, C., Donohue, R., Shea, T., Cooper, B., & De Cieri, H. (2016). Leading and lagging indicators of occupational health and safety: The moderating role of safety leadership. *Accident Analysis & Prevention*, 92, 130-138.



Source: <https://www.ehstoday.com/predictive-analytics-safety>

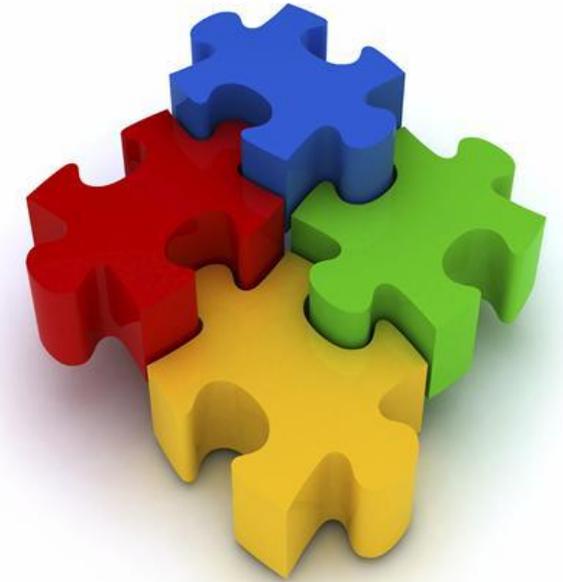
OHS Resource	Traditional Data	Big Data / Analytics
Safety Data	lagging indicators causation	leading indicators correlations
Context Setting Data	tasks, site variables, equipment	robotics, Internet of Things, real time
Internal	exposure records, logs, vehicle records, MSDS, inventories	HR information systems, domain- driven
External	culture, known characteristics	data mining, frames, model building

- Real time ecosystem monitoring
- Stakeholder segmentation
- Descriptive to predictive
- Follows leading indicators
- Bottom-up, domain-driven
- Relevance over method
- Bigger is better



BIG DATA

<https://www.ngdata.com/mastering-big-data-analytics/>



- The Programmatic Perspective
- The Technological Perspective
- The Socio-Cultural Perspective
- The Knowledge-Organization Perspective

	Programmatic Perspective	Technological Perspective	Socio-Organizational Perspective	Knowledge Organization Perspective
<b>Knowledge</b>	<p>Deep domain knowledge of hazards and risks</p> <p>Correlations between predictions and current safety performance</p>	<p>Operating systems, platforms, applications</p> <p>Statistical modeling and algorithm theories</p>	<p>Theories of diffusion of technology, culture, organizational integration</p> <p>Organizational models for predictive analytics</p>	<p>Broad industry and market trends and opportunities</p>
<b>Skills</b>	<p>Design, develop and evaluate safety programs</p> <p>Engage effectively with safety stakeholder perspectives</p>	<p>Design, develop, visualize, support, and evaluate distributed systems</p> <p>Implement analysis models systematically</p>	<p>Communicate and manage integrated systems</p> <p>Change management</p>	<p>Strategic planning</p> <p>Transformational leadership</p>
<b>Abilities</b>	<p>Effectively articulate safety performance behaviours</p>	<p>Create hardware and software integration across units, design and program interfaces using knowledge-representation schemas</p>	<p>Get everybody working from the same playbook</p>	<p>Lead the organization based on alignment to core values</p>

# Finding Pluto





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