DART: A DATA ANALYTICS READINESS TOOL

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Intent of study: This study will further develop an existing version of the DART with the goal of having greater content and predictive validity.

Background:

- Attempts to use data in occupational safety contexts often fail because of limitations with data management systems.
- Analytics readiness tools are needed to help organizations improve their data management system and achieve predictive level analytics (Lepenioti et al., 2020).

References:

- Lepenioti, K., Bousdekis, A., Apostolou, D., & Mentzas, G. (2020). Prescriptive analytics: Literature review and research challenges. International Journal of Information Management, 50, 57-70. doi: 10.1016/j.ijinfomgt.2019.04.003

Four Year Plan

| Build and Revise DART | → | Interactive web-based tool | → | Partner baseline testing | → | Partner efforts and changes from baseline |

| Year 1 | Year 2 | Year 3 | Year 4 |

Methods:

- Build the DART's content through interviews with various subject matter experts (SMEs).
- Build an interactive web-based tool with full functionality of the DART (self-assessment, reports, etc.).
- Test the tool's predictive abilities by investigating partner companies' scores alongside safety related data (i.e., near misses and injuries) across multiple years.
- Findings from above processes will be used as validation for the assessment.
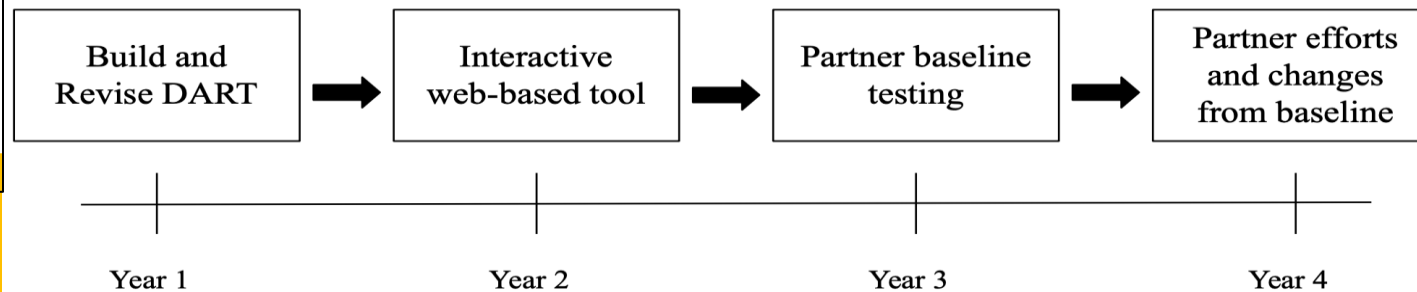
Implications:

- Analytics readiness tools are needed not only to understand the quality of an organization's current data management system, but to also understand what actions can be taken to improve these systems.
- A valid data analytics readiness tool for occupational safety would benefit organizations seeking to improve their data management systems and reach predictive level analytics which could then be used to decrease injuries and fatalities in the workplace.