

NATIONAL SCIENCE FOUNDATION  
**Proposal Abstract**

**Proposal:**1937118

**PI Name:**Grann , Jeffrey

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**Proposal Title:** Convergence Accelerator Phase I (RAISE): Connecting Indiana's Learn-And-Work Ecosystem  
**Institution:** CREDENTIAL ENGINE, INC.  
**Abstract Date:** 08/01/19

The NSF Convergence Accelerator supports team-based, multidisciplinary efforts that address challenges of national importance and show potential for deliverables in the near future.

The broader impact/potential benefit of this Convergence Accelerator Phase I project is to enable American workers to successfully navigate their career by accessing and sharing information pertaining to credentials and jobs using connected data exchanges. Exchanging career goals, records, credentials, competencies, assessments, job descriptions, and pathways as machine-actionable data will be foundational to realizing this goal. Because the education and employment sectors have many different documentation policies, processes, roles, and governance, this project engages a wide range of experts. The leadership team represents multiple disciplines including education, government, business, computer science, philanthropy, policy, educational psychology, and ethics. Indiana is an ideal context for this research because multiple related initiatives are actively but independently being developed across the state. Phase I activities will build an extensive partner network to document how each initiative's data exchanges can connect in support of particular use cases. Identified data gaps limit the value of these initiatives and will be added to a roadmap for eliminating technical barriers. Similar to how connected data exchanges have rapidly improved the travel industry, we believe state-level governance of key data exchanges will accelerate innovative applications for workers and help other state leaders advance similar initiatives.

This Convergence Accelerator Phase I project focuses on a state-level governance gap concerning the connections among key data exchanges supporting students, education providers, workers, and employers. In Indiana, as in other states, these data exchanges are at varying points of development and adoption. Ensuring these data exchanges are sufficiently connected to support key use cases is dependent upon voluntary efforts and weakly instantiated into the business processes of specification organizations themselves. As industries increasingly become "information-based", competing business models have the potential to delay or even derail innovative applications and/or inadvertently centralize control of key data exchanges. Our research objective is to advance knowledge concerning how states could better address these problems via team-building activities. Specifically, data experts will be convened to define evaluation criteria for analyzing data exchange information. Indiana education providers and employers will also be engaged directly via two multi-disciplinary workshops to document important Indiana use cases and supportive data exchanges, such as searching for a certificate program based on a competency required in a job description. As a result, the project team will create a prioritized roadmap, a toolkit for state leaders, and a Phase II proposal for connecting Indiana's learn and work ecosystem.

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This award reflects NSF's statutory mission and has been deemed worthy of support through evaluation using the Foundation's intellectual merit and broader impacts review criteria.