NCOEA MISSION: To create Opportunity Engineering and Analysis, a dynamic new computational field designed to assist human potential in life, society and the economy.

The National Center for Opportunity Engineering & Analysis, NCEOA, will create a new field of applied data engineering and analysis with the goal of providing new tools, open services and a research platform. These efforts will increase access to opportunities for all Americans in the job markets, education attainment, career training, and the utilization of support services.

Today, these areas are part of multiple policy agendas, government, institutional and foundation programs, and consumer and commercial applications. However, the data in each area is not organized sufficiently or efficiently for the purposes of guidance, prediction, matching and research. Without a new system, it is difficult to accurately calculate opportunity potentials and chart pathways through education, training and support to employment and entrepreneurship.

Despite the ever-increasing richness of data in labor, employment, education, training and social services, no entity has harnessed the unique combination of the latest computational and social science methods to power new applications and provide better use-data to the social sciences.

NCOEA will address these needs by combining the computational research capabilities of the Computation Institute (CI), a joint initiative of the University of Chicago and Argonne National Laboratory, the University's social science and economics capabilities, and the California based nonprofit National Laboratory for Education Transformation (NLET).

NCOEA will operate in Chicago and Silicon Valley as both a resource for existing workforce efforts and as a foundation for new consolidated activities that envision education, training, employment and entrepreneurship, or *opportunity*, as part of a continuous thread of computational resources that neutrally and technically support academic, programmatic and commercial activities.

NCOEA researchers and developers will extend computational *opportunity* engineering and analysis in and between the separate fields education, training, labor, employment and social service data for the benefit of and use by individuals, programs, companies and organizations. At the same time, NCOEA will provide high-quality data for real-time social science and economic analysis and research, saving the research community time and resources to access the best data.

These research and technology development efforts will focus on large-scale, critical components of national and economic policy such as education perseverance, attainment and transfer into work, and employment and entrepreneurship opportunities, and will also support efforts to assist programs and organizations directly assisting individuals, families and communities.

NCEOA's robust agenda and vision is supported by the rich history of University of Chicago in these areas including the seminal work of early 20th Century educator John Dewey, sociologist James Coleman and Nobel Laureate economist Gary Becker and by recognized leadership in STEM and computation as well as the management of the Argonne and Fermi national laboratories.

NCOEA is a partnership between the Computation Institute at the University of Chicago and Argonne National Laboratory and the California based nonprofit, National Laboratory for Education Transformation, www.NLET.org