Scaling Trust and Making Connections:
Piloting a Game Changer for the US HE Admissions Process

The US Higher Education admissions process involves over 20 million students per year, interacting with 4,400 degree-granting colleges and universities, 24,000 K-12 secondary schools, dozens of service entities such as testing services, admissions handlers, transcript handlers, and advisory services. All of these offer online services to students and use a disparate network of backend data-exchanging relationships. These current systems have a poor end-user experience, poor level of identity assurance, and cumbersome data flows that emulate paper-based processes at best. Each organization is an island, duplicating services that are needed for security and communication but are not core to its mission, leaving prospective students to manage a dizzying array of accounts, forms, and information flows.

What if we could create a platform that would enable business and technical trust among organizations, reduce duplication and cost, enable easy-to-integrate connections for accommodating end-user privacy, increase security, and act as a foundational layer for innovation for those participating?

Higher Education, K12, and the admissions industry are just beginning to address this problem with modern identity technologies and coordinated service delivery. This proposal outlines a project to demonstrate the feasibility of identity-enabled business processes across the sector in ways that are aligned with the NSTIC vision.

CommIT Collaborative

The Common Identity and Trust (CommIT) Collaborative, formed a year ago between Internet2/InCommon and the Postsecondary Electronics Standards Council (PESC), includes a diverse group of corporate and Higher Education voluntary stakeholders , working to develop this new service infrastructure. Aligned with NSTIC, this project includes a technology, business, and policy solution to ease the burden of high school students and adult learners transitioning to Higher Education and the organizations that service them.

While this project is making incremental progress through volunteer work and very modest participant contributions, funding from this FFO would significantly accelerate the reality of an infrastructure, business model, and governance structure necessary for marketability and sustainability.

Overview

Federated Authentication, an approach to reducing credential duplication and increasing privacy, has had significant pockets of adoption across Higher Education and Research sectors globally, including deployments with U.S. Federal and corporate service partners. For instance, 5.9 million individuals, mostly students, have access to over 700 InCommon-federated services. However, large-scale linkages are needed at broader and earlier points of entry for individuals. In particular, the millions of young and old students annually applying to college need fewer temporary credentials, higher identity assurance for the credentials they do have, and an easier process that provides user-control of their transactional attributes across a wider gamut of relying parties.

Service Provider systems at colleges, businesses, and Federal Agencies rely on their own isolated practices and approaches. Each new service provider reinvents the wheel for data transfer process, credential management, and privacy approaches. Enabling a common trusted, service infrastructure to allow for not only run-time user consent, but extended user-defined trust relationships can reduce the costs related to how information is shared, validated and used to place a student in a program.

The goal of this proposal is to support a pilot program for traditional and non-traditional students applying to college. CommIT will leverage federated identity and develop a related infrastructure to provide a rational and privacy-preserving way of managing access across the diverse organizations involved in the admissions process. In addition, CommIT will establish a governance process to tackle the common business model, policies, decision-making, and conflict resolution processes involved with a multi-partner relationship.

Collectively, this benefits the students by offering more service choice and convenience by reducing cost and enabling a pluggable policy, data, and privacy framework to support new interesting services.

Proposed Approach

The CommIT proposal includes the following components:

1. Pilot two technical approaches to enable K12 students to apply to college using federated credentials. The first approach entails working with one or more K12 districts to identify/deploy a FICAM LoA2 identify provider. Since few K12 districts are federated, the second approach entails establishing an admissions-community FICAM LoA 2 identity provider. Prospective students without federated credentials could acquire them for use during the admissions cycle. Both approaches would encourage students to transition to a HE institutional credential linked from their K12/CommIT credential once matriculated while adhering to the FICAM Privacy Requirements.

2. Develop a mechanism to elevate credential strength to FICAM LoA 2 to enable new services and reduced risk. Testing agencies such as College Board and ACT identity proof students before taking the SAT or ACT tests. The project will leverage these and other processes and events where students are currently expected to prove their identities to escalate and transition student's credentials to LoA 2.

3. Develop a detailed understanding of the privacy and transparency requirements, including the needs of students, K12 and HE institutions, and admissions services. Use this understanding to develop the right balance between policy and an easy-to-use privacy-preserving architecture that allows for flexibility in service requirements and implementation. This includes not just consent for basic identity data but user-centric management of channels for information flow (such as transcripts) among the participant services. The approach chosen will be compliant with the disclosure provisions of the Family Education Rights and Privacy Act, FICAM privacy requirements, as well as other appropriate privacy legislation.

4. Create a governance structure for the CommIT project and ongoing Collaborative to enable the development of shared policy and operating structures like membership requirements, interoperability standards, and conflict resolution.

5. Develop a flexible business model for sustainability of authentication and access management, policy, and business infrastructures. Since participants will be enjoying reduced costs, students themselves may be able to use CommIT privacy, linking and account services for free.

6. Include a diverse group of partners to increase the value of and market for higher-LoA credentials including K12 systems, state network providers, for-profit and non-profit organizations, and higher education institutions. Current partners in CommIT that may participate in the pilot include:

- Corporate and not-for-profit service providers including National Student Clearinghouse/Meteor that represents non-governmental student loans, Common App, AcademyOne, Parchment, ConnectEDU, College Board, and ACT.
- University partners including North Carolina State University, University of Wisconsin-Madison, The Pennsylvania State University, University of Oregon, and University of Southern California.

In addition, CommIT will recruit one or more State R&E Network Providers such as MCNC or NJEdge, respectively North Carolina's and New Jersey's R&E networks, which will connect with and support K12. From the financial sector, USA Funds and Northwest Loan Association are interested in participating. CommIT has also approached Department of Education.

Project Timeline

In the first year, CommIT will 1) build the governance structure, identify CommIT policies, and develop business model, 2) design and prototype data architecture, identity provider, minimal identity management system and related password management processes, 3) develop identity proofing processes and connections into the CommIT IdM System, 4) assist participating organizations to integrate the CommIT infrastructure 5) work with a federated K12 district to bring its processes/infrastructure up to LoA 2, and 6) Identify K12 and adult-learner pilot groups.

In the second year, CommIT will conduct a pilot with test data, starting in the fall of 2013 and move to limited production in the late spring of 2014. In addition, CommIT will begin recruiting new members to the Collaborative under the new business/governance model to increase the value of the infrastructure and number of services deployed.

Budget Justification

Each of the CommIT leads (see below) will receive support to fulfill their roles. The LoA2 Identity Provider, related minimal identity management system (for password reset), privacy-preserving data architecture, and participant tool development will require significant funding. One or more testing services will receive funding to support integrating their identity proofing processes into the CommIT IdP. One or more State R&E Network Providers will receive funding for liaising with and supporting the K12 pilot. Several higher education institutions and corporate service partners will be contractors to partially offset their participation in the pilot.

Due to the scale of the project and number of partners, the final proposal submitted will be XXX.

Collaborators to Ensure Success

InCommon, operated by Internet2, is a FICAM-approved trust framework provider that supports trust infrastructures for the Research and Education Community. InCommon would be the cooperative agreement, co-project, and technical leads.

PESC is a non-profit, community-based, umbrella association of diverse organizations that enable cost-effective connectivity between data systems to accelerate performance and service, to simplify data access and research, and to improve data quality along the higher education lifecycle. PESC would be the governance and business development lead.

Georgetown University is one of the world's leading academic and research institutions. Georgetown would be the privacy policy and co-project lead.

The project team is willing to collaborate with other synergistic proposals.

Anticipated Outcomes

The Higher Education application process requires user data to span organizations and stakeholders. Without trust, all must rely on their own isolated processes and duplicate authentication and access practices. CommIT can reduce the costs, headaches, and processes related to how people access services and how information is shared, validated and used to place a student in an academic program.

The outcome of this pilot will demonstrate the utility of the concept, understanding of the privacy requirements, and an architecture that would benefit multiple partners in the following ways:

- Colleges and Universities, Corporate Partners, and Federal Agencies will save money and time, eliminate managing the temporary credentialing process for prospective students, improve security, streamline records management and reduce risk due to the increased level of assurance.
- Students will manage fewer credentials and enjoy increased convenience in applying to college. Individuals would provide consent for service interaction and control the flow of their information from one partner to another, managing their privacy. Moreover, they would benefit from innovative, more secure services enabled by stronger credentials and robust common service infrastructure.

Rooted in CommIT is the desire to reduce the hidden costs embedded across decentralized higher education processes. As online relationships and opportunities increase, rising tuition across public and private institutions is related to the lack of reliance on shared services and technology. Isolated and redundant services such as authentication and identity proofing can be shared to lower costs across thousands of institutions while improving consumer services.

This CommIT proposal offers a unique opportunity to connect K-12, higher education, industry, and, in the longer term, federal agencies, that will afford greater productivity, improved outcomes and lower cost.