



## WILLIAM E. KIRWAN CENTER *for* ACADEMIC INNOVATION

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### USM Digital Badging Initiative As of March 2017

#### Context

During this time of disruptive change in higher education, public colleges and universities are being challenged to justify the value of their degrees and credentials, and to produce evidence of return on investment amid budget constraints and the changing character of students. Through the Kirwan Center for Academic Innovation, the University of Maryland System (USM) expands its system-wide capacity to create effective, efficient learning environments that enhance student success. As the first system-level center to conceptualize, promote, study, and disseminate groundbreaking academic innovations, the Kirwan Center is discovering what works and developing strategies aimed at scaling and sustaining the best models to support student success and transform higher education both within Maryland and across higher education nationally.

Currently, as one component of a broad academic transformation platform, the Kirwan Center is addressing a critical issue: employers' perceived lack of college graduates' career-ready skills. Many surveys consistently reveal that employers are not convinced college graduates are arriving at the workplace with the career-ready skills needed to succeed. While this is likely true for some, it may also be the case that students who actually *do* possess the requisite career-ready skills struggle to synthesize what they have learned and translate their curricular and co-curricular experiences into the specific competencies sought by employers.

Since Summer 2015, USM institutions have been working together to design, develop, and explore the feasibility of digital badging. While all USM institutions are eligible to participate, to date the most active institutions have been Coppin State University; Frostburg State University; Towson University; University of Maryland, Baltimore County; the Universities at Shady Grove; and University of Maryland University College. As an innovative way to validate and better communicate graduates' career-ready skills to employers, the USM Digital Badging Initiative focuses on **Problem-Solving, Collaboration, Critical Thinking, Communication, Leadership, and Professionalism**.

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*The transitions that students make from education to employment can be fraught with uncertainty, poor communication, and inefficiencies. Students have difficulty articulating their knowledge, skills, and abilities in their resumes and online profiles, and their evidence of learning from academic activities often does not “translate” into employment processes. Employers often do not understand what is included in credentials; they then make assumptions about what certain credentials mean, and what graduates should know and be able to do. Improved communication about the competencies that are included in credentials can help to address these problems for students, academic institutions, and employers.*

*- ACE, Communicating the Value of Competencies (2016)*

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Badges “make visible and validate learning in both formal and informal settings, and hold the potential to help transform where and how learning is valued” ([MacArthur Foundation, n.d.](#)). And, because they are digital, badges include access to publicly viewable artifacts that not only validate learning, but also provide evidence of that learning, thus allowing badge consumers more insight into exactly what the

badge earner did to achieve that badge. Additionally, being digital and openly accessible means these badges can be shared through digital portfolios and social and professional networks such as Facebook and LinkedIn.

As a complement to traditional credentials, badges will 1) motivate students to pursue opportunities that will help them become “career-ready,” 2) help students translate their experiences into the higher-order skills employers seek, and 3) differentiate students in a competitive marketplace.

There are several benefits to pursuing this initiative collaboratively across the USM:

- Working together is encouraging a collective conversation about common issues we face across the USM in providing a quality education that will prepare students for their careers and life-long learning;
- Each institution benefits from the resources and tools we develop and we will support each other as we plan, design, and implement the project; and
- Collectively we can leverage relationships with regional employers and national leaders in the field to inform and support our badging system and to validate the badges we issue.

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*Today's badges are digital credentials that represent skills, interests, and achievements earned by an individual through specific projects, programs, courses, or other activities. There is a learning ecosystem behind the badges that make them powerful and connected credentials.*

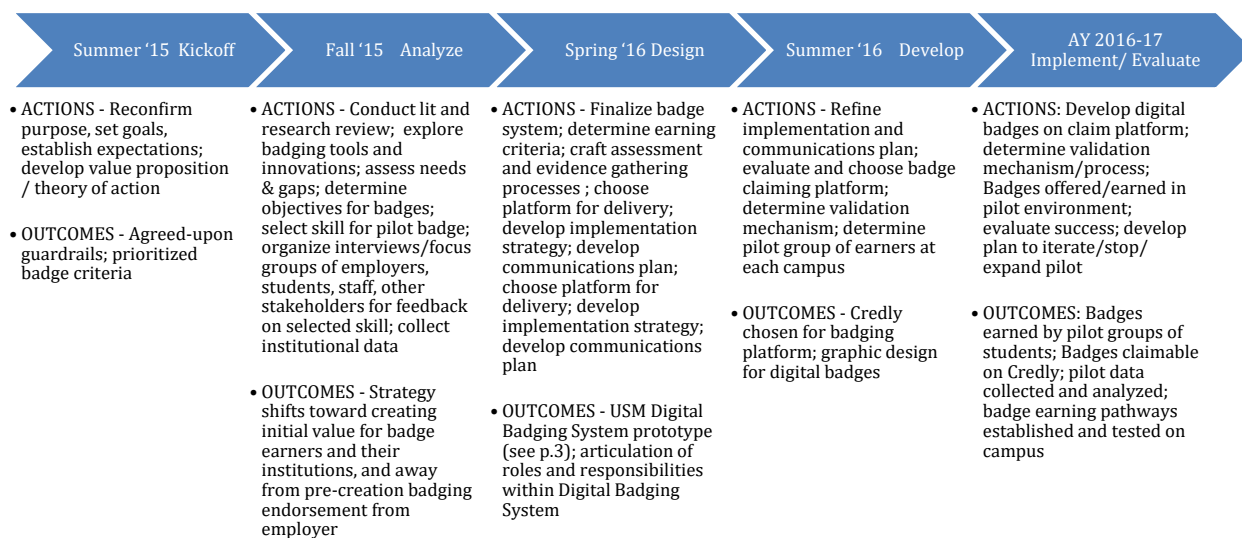
*-Alliance for Excellent Education (2013), Expanding Education and Workforce Opportunities through Digital Badges*

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### **Design Process and Timeline**

We are using the Analyze, Design, Develop, Implement, and Evaluate (ADDIE) instructional design model to inform our process. The work completed/to be completed in each of the phases and are timeline are illustrated in Figure 1 and described in more detail below.

**FIGURE 1. BADGE DESIGN PROCESS AND TIMELINE**



### **Summer 2015: Kickoff**

During the kickoff phase of our work, the Collaborative met to confirm purpose of the initiative; set goals and establish expectations and working assumptions; and to develop value proposition and theory of action. This phase concluded with a set of agreed-upon “guardrails” for our work as well as prioritized set of badge criteria.

### **Initial Guardrails**

- We agree to share information, insights, resources across institutions throughout this initiative.
- The badges we create will be open to all USM institutions and we will work towards assuring the USM badges are as open as possible for others as well (although the degree of “openness” may change over the course of the initiative).
- The badge will address a career ready skill, defined as communicating what students should know and be able to do to be “career ready.”
- Badges will be created in collaboration with employers.
- Any skill selected will be validated as valued by employers for use in the hiring process.
- Badges may be scaffolded or include a progression of skill development.
- Evidence for earning badges will largely come from co-curricular experiences, and may also come from curricular experiences.

### **Weighted Badge Criteria**

<b>Criteria</b>	<b>Definition</b>	<b>Weight</b>
High employer relevancy and value	Meets a need in the employer recruiting and selection process. Helps differentiate candidates, improves the match and fit.	4
Evidence easily communicated	Evidence of completion can be made clear and flexible, specific.	4
Easily measured / Low admin hassle to validate / issue	Easily validated; does not require extensive assessment / person-hours to measure and determine success.	4
High student value and achievable	Allows students to develop and demonstrate skills not easily documented by curriculum. Clearly achievable/accessible to all kinds of students.	3
Applicable to all disciplines	Any student, regardless of program or major, is able to pursue.	3
Alignment to established standards	To the extent that standards exist for skill, badge criteria are aligned.	3
Can be demonstrated primarily through co-curricular experiences	Complements curricular work; does not replicate or replace curricular experiences.	3
Cannot be earned for participation alone	Must include measurement of competency.	3
“Evergreen”	Does not “fade,” become obsolete; remains valid in the long term.	2
Evidence should be built over period of time	Not a one-off experience; must require time to develop, both breadth and depth.	2
Alignment to institutional mission	Aligned to priorities of institutions.	2
Inter-disciplinary	Requires exposure to variety of perspectives.	1

### **Fall 2015: Analyze**

During the Fall semester of 2015, we concentrated on gathering and analyzing data to identify the gaps in career-readiness skills for USM graduates, as well as the benefits and challenges of digital badging tools and innovations. We conducted literature and research reviews of other digital badging initiatives and career readiness standards; explored badging tools and innovations; and organized interviews, surveys, and focus groups of employers, students, staff, other stakeholders to get feedback on the badging initiative’s design and goals.

Career-readiness standards and employer surveys reviewed included the following:

- Towson's meta-analysis of research on skills desired by employers
- P21 - [Framework for 21st Century Learning](#)
- AAC&U - [Essential Learning Outcomes](#) and [VALUE rubrics](#)
- EDC - [Work Ready Now](#)
- [New World of Work](#)
- Institute for the Future - [Future Work Skills](#)
- Business Roundtable- [Common Employability Skills](#)
- [Connecting Credentials Framework](#)

We also facilitated a series of conversations with Dr. Daniel T. Hickey, Professor of Learning Sciences at Indiana University Bloomington, an expert in the evolving field of digital badging and the author of a MacArthur Foundation sponsored research study that aimed to understand where digital badges have been most effective.

Another key activity during this phase was the survey of regional employers. We surveyed 138 regional employers in October-November 2015 with a 22.4% response rate. Respondents represented a range of industries including Government/Non-Profit (17.95%); Technology Services (15.38%); Finance and Insurance (15.38%); and Health Care and Social Services (12.82%). Respondents generally held the title of Talent Acquisition Manager, Recruiter, or HR Manager, and 51% of respondents had been in their roles 3 years or less. High-level findings from the survey included:

- The top career-ready skills identified by respondents were communication, critical thinking/analytic reasoning, initiative, leadership/decision-making, and strong work ethic.
- The majority of the respondents had not heard of digital badging prior to receiving the survey.
- Employers did not see much value in a digital badge certifying the top-rated career-ready skill they identified.
- The respondents believed there was little value-add for a badge as compared to their current means of collecting data on potential hires.
- Respondents were unsure if digital badges could easily fit into their current candidate evaluation processes.
- Respondents indicated there may be some value in having the badge endorsed by the USM.
- Respondents indicated there may be value in having the badge endorsed by another party.
- There was some interest among the respondents in providing or attending special recruitment opportunities for badge earners, but many were on the fence.

This survey led our team to begin thinking differently about the feasibility of having badges endorsed by employers before they were created, and instead led us to shift our focus to creating initial value for the badge earners and their institutions by basing the badges on those skills most frequently requested by employers.

### ***Spring 2016: Design***

In the third phase of our work, the design phase, we have worked on synthesizing all the data and information gathered in the analysis phase, and revisiting our original purpose, goals, and expectations for this initiative. That process has led us to the creation of the USM Digital Badging System. <sup>1</sup> This graphic illustrates the key components of the badge system: 1) **The badge earning pathway** established by the institution, which may include programs, coursework, experiences, and/or assessment of prior learning and experience; 2) **The evidence-based criteria**, established by the institution, to assess

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<sup>1</sup> See Appendix A

whether students have the knowledge/skills/abilities to meet the standards for the badge; 3) **The dimensions**, shared and standardized across the USM, describing the specific knowledge/skills/abilities that an earner must possess to earn the badge; and 4) **The badges** themselves that validate the earner has the associated knowledge/skills/abilities. The long-term vision is to offer a meta-badge from the USM—the Launch Badge—for students who have earned all of the associated career-ready badges to validate that they have, through the process of earning all of the sub-badges, able to articulate certifying that earners are ready to start their careers. The goal is that through the process of acquiring all the career-ready badges, earners will hone their ability to identify and articulate their career-ready skills, strengths, knowledge, and experiences relevant to the positions and/or careers they seek.

### ***Summer 2016: Develop***

Over the summer 2016, we worked together to establish minimum criteria for each badge earner to ensure consistency between and among badges issued by different institutions, such that earners of any badge within the USM system must have:

- Demonstrated proficiency in all the dimensions for their badge as established through the USM Digital Badging initiative
- Practiced the badged skill in at least two contexts
- Earned the badge based on criteria that required a progression of skills
- Reflected on the badged skill
- Produced at least two distinct pieces of evidence that they possess the badged skill
- Were assessed in at least two ways that they had earned the badge (by self, by peers, by experts)

The development phase also included the articulation of the shared set of dimensions for each badge<sup>2</sup>. These dimensions articulate by badge what knowledge/skills/abilities badge earners demonstrated to earn the badge. Each institution across the USM will use these shared dimensions to develop rubrics to assess students' knowledge/skills/abilities as they relate to the badge competency. Earning criteria will be backwards mapped from these dimensions to ensure that the badge-earning pathway on campus provides opportunities for students to gain and demonstrate the articulated knowledge/skills/abilities.

Finally, we clarified the roles and responsibilities for each partner participating in the USM Digital Badging initiative:

### **Badge Issuers (The Institutional Partners) in the USM System of Badges will:**

- Define what experiences/knowledge/skills gained on or off campus will provide eligible evidence for earning a badge
- Define the criteria for earners
- Define what evidence earners will need to present
- Ensure their badges meet the dimensions set by the USM Badging Initiative, which may include participation and performance-based activities, but not participation alone.
- Gather the evidence of students' demonstration of the competency
- Determine if students have met minimal levels of proficiency to earn the badge
- Use a rubric to determine if students have met minimal levels of proficiency to earn the badge
- Issue the badges
- Use the results from badge earners and other data to strengthen program effectiveness

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<sup>2</sup> See Appendix B

**The Badge Endorser (The University System of Maryland Digital Badging Collaborative) will:**

- Articulate the dimensions of each badge competency
- Articulate the cross-cutting hallmarks or minimum criteria of the badges within the USM badging system
- Validate the integrity of the issuance of the badges across institutions (i.e. validate that a leadership badge offered by Towson is as meaningful as a leadership badge offered by Frostburg)
- Maintain the enterprise site for USM Digital Badging Initiative
- Ensure the claiming process aligns to requirements of FERPA and other student privacy laws
- Develop a consistent graphic design for the system of badges
- Support ongoing cross-institutional collaboration and information-sharing
- Draw on lessons learned from across the institutions to spur larger scale improvement, growth, and sustainability of this effort

***Fall 2016/Spring 2017: Implement and Evaluate***

This academic year, the participating institutions across the System will pilot the badges on campus with small, targeted groups of students. Each institution has developed an earning pathway for their badges, earning criteria, and rubrics and other assessment tools to evaluate whether a student has met the criteria to earn the badge.

The badge validation and claim process will be managed by the USM Digital Badging Collaborative. The claim process will allow the Collaborative to validate that earners have in fact demonstrated the requisite competencies. The Collaborative is working with Credly to provide a centralized platform for validating and claiming the badges. Via Credly, students will be able to claim and then share their badges online through the web and social media.

**Next Steps**

The Kirwan Center would like to determine the philanthropic community's interest in supporting a planning grant for the USM Digital Badging Initiative. During the planning period, our aim is to 1) develop a constellation of career-ready badges for testing as a proof of concept, 2) provide students at participating USM institutions with opportunities to earn digital badges, and 3) evaluate whether the pilot is meeting its intended objectives. In addition, we would like to continue to socialize and test the concept of digital badging of career-ready skills with regional and local employers, national leaders in the field, students, faculty, and staff.

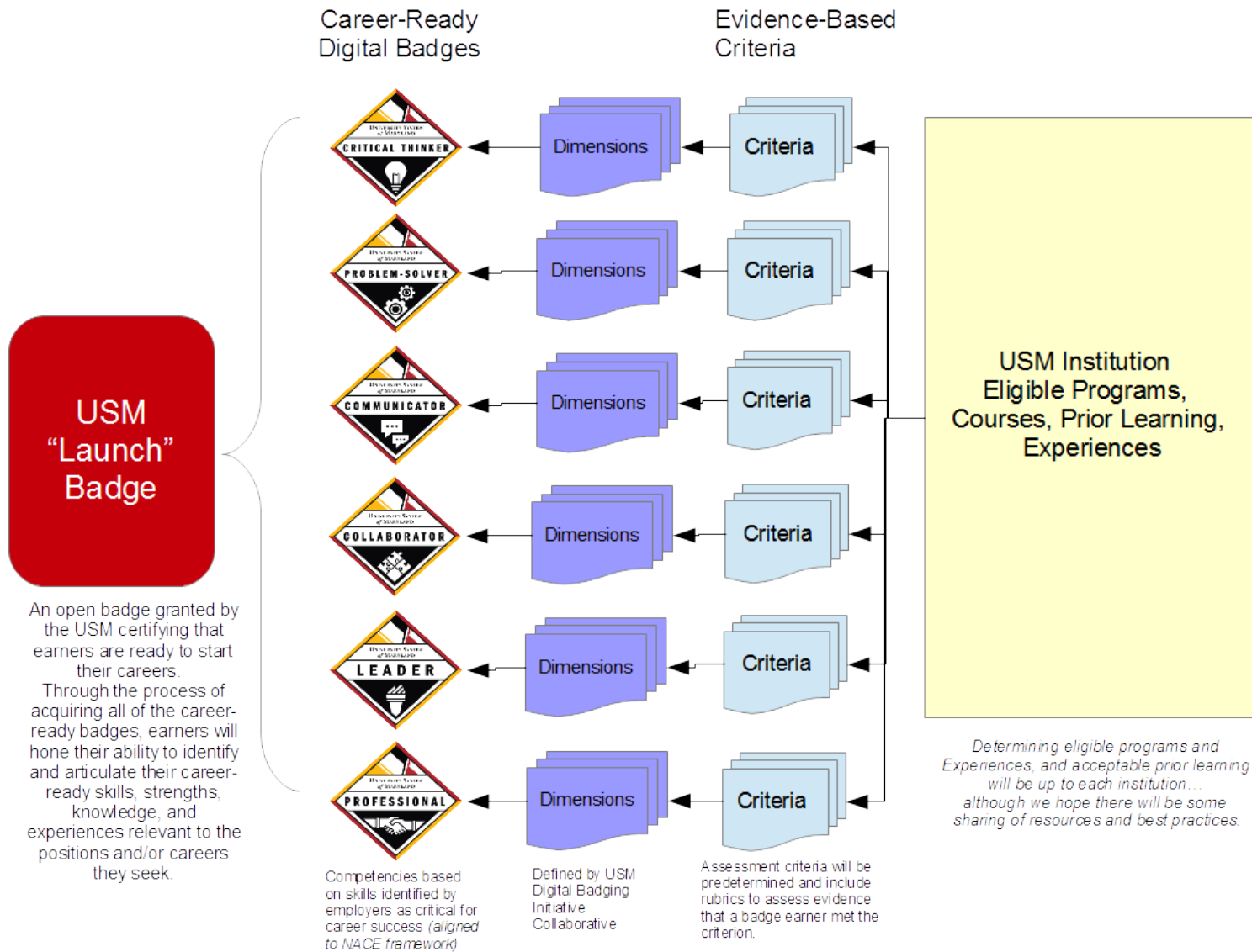
We believe badges will complement traditional credentials by providing a better way for students to communicate to employers what they know and are able to do. In turn, badges will help employers make better hires by improving fit and match between students and jobs. With support from the philanthropic community, the Kirwan Center believes the USM Digital Badging Initiative will foster a career-relevant system that benefits both students and employers, and is scalable ultimately to higher education institutions nationwide.

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**About the Kirwan Center for Academic Innovation**

*Established in 2013, the Kirwan Center explores—through rigorous quantitative and qualitative research—the interplay between approaches proven to improve student success and the feasibility of implementing those approaches in context. Developed at a system level, the Kirwan Center capitalizes on the USM’s position as a microcosm of public higher education and brings real value to the work and the national discussion around academic transformation. The Kirwan Center’s research-to-practice perspective provides not only evidence-based models for improving student success, but also proven strategies for how these approaches might be scaled and sustained in a variety of contexts both within Maryland and across higher education nationally. This work by the University System of Maryland William E. Kirwan Center for Academic Innovation is licensed under a Creative Commons Attribution License CC BY 4.0.*

**APPENDIX A: USM DIGITAL BADGE SYSTEM**





## APPENDIX B: USM BADGE DIMENSIONS

Name	Description	Dimensions
<b>The Critical Thinker</b>	The CRITICAL THINKER BADGE validates that the earner has demonstrated the ability to analyze and evaluate thinking and commit to constant improvement.	<p>The Critical Thinker excels in the art of analyzing and evaluating thinking with a view to improving it by effectively:</p> <ul style="list-style-type: none"> <li>• Raising vital questions and problems, formulating them clearly and precisely.</li> <li>• Gathering and assessing relevant information, using abstract ideas to interpret it effectively.</li> <li>• Coming to well-reasoned conclusions and solutions, testing them against relevant criteria and standards.</li> <li>• Thinking open-mindedly within alternative systems of thought.</li> <li>• Recognizing and assessing, as need be, one’s own assumptions, implications, and practical consequences.</li> <li>• Communicating effectively with others in figuring out solutions to complex problems.</li> </ul>
<b>The Problem Solver</b>	The PROBLEM SOLVER BADGE validates that the earner has demonstrated the skills necessary to resolve complex problems/challenges through exercising sound reasoning to analyze issues, make decisions, and overcome challenges. The individual can obtain, interpret, and use knowledge, facts, and data in this process, and may demonstrate originality and inventiveness.	<p>The Problem Solver tackles challenges alone or in teams by effectively:</p> <ul style="list-style-type: none"> <li>• Articulating the problem.</li> <li>• Identifying the desired end result.</li> <li>• Brainstorming creative options for achieving the desired end result.</li> <li>• Analyzing and selecting the option that best achieves the desired end result.</li> <li>• Developing a plan of action that will achieve the desired end result.</li> <li>• Enacting the plan of action and adapting as needed.</li> <li>• Evaluating the outcomes in relationship to the desired goals.</li> </ul>
<b>The Communicator</b>	The COMMUNICATOR BADGE validates that the earner has demonstrated ability to articulate thoughts and ideas clearly and effectively in written and/or oral forms.	<p>The Communicator expresses thoughts and ideas by effectively:</p> <ul style="list-style-type: none"> <li>• Using syntax, grammar, and/or vocabulary appropriate to the context and modality.</li> <li>• Ensuring messages are organized, clear, and consistent with any supporting material.</li> <li>• Tailoring the message and delivery method to the topic, audience, purpose, and context.</li> <li>• Reflecting on one’s own messages and adjusting as appropriate.</li> <li>• Critically analyzing others’ messages.</li> <li>• Engaging diverse and competing perspectives and the ways they influence communication.</li> </ul>

Name	Description	Dimensions
<b>The Collaborator</b>	The COLLABORATOR BADGE validates that the earner has demonstrated the skills necessary to be a successful and contributing member of a professional team.	<p>The Collaborator advances the work of a team by effectively:</p> <ul style="list-style-type: none"> <li>• Articulating one’s own role on the team and the roles of others.</li> <li>• Integrating team members’ diverse viewpoints.</li> <li>• Motivating and supporting others on the team.</li> <li>• Building upon or synthesizing the contributions of others.</li> <li>• Offering ideas, suggestions, alternative solutions, and feedback.</li> <li>• Accounting for one’s own assigned role and responsibilities on the team.</li> <li>• Negotiating, managing, and resolving conflicts when they arise.</li> </ul>
<b>The Leader</b>	The LEADER BADGE validates that the earner has demonstrated the ability to leverage the strengths of others to achieve common goals, and use interpersonal skills to coach and develop others. The individual can assess and manage self and others; use empathetic skills to guide and motivate; and organize, prioritize, and delegate work.	<p>The Leader leverages the strengths of others to achieve common goals by effectively:</p> <ul style="list-style-type: none"> <li>• Assessing individual and collective strengths, weaknesses, and capacities to achieve the desired goal.</li> <li>• Engaging diverse or competing perspectives.</li> <li>• Motivating others.</li> <li>• Articulating a vision and strategy.</li> <li>• Organizing, prioritizing, and delegating work, roles, and responsibilities.</li> <li>• Reflecting on how one’s leadership affects process and outcomes and adjusting as appropriate.</li> <li>• Reviewing outcomes and assessing implications for future plans.</li> </ul>
<b>The Professional</b>	The PROFESSIONAL BADGE validates that the earner has demonstrated personal accountability, effective work habits, integrity, personal accountability and commitment.	<p>The Professional strives for excellence by effectively:</p> <ul style="list-style-type: none"> <li>• Taking responsibility for one’s actions and outcomes.</li> <li>• Examining the implications of one’s own behavior and decisions.</li> <li>• Acknowledging mistakes and learning from them.</li> <li>• Following through on commitments.</li> <li>• Persevering in the face of challenges and changes.</li> <li>• Acting with the interest of the larger community in mind.</li> <li>• Evaluating one’s own performance over time and adjusting.</li> </ul>

## APPENDIX C: RESEARCH AND RESOURCES INFORMING OUR WORK

### ***Career-Ready Skills***

[Career Readiness Defined: NACE defines career readiness, identifies key competencies](#)

[ACE: Communicating the Value of Competencies](#)

[ACE: Quality Dimensions for Connected Credentials:](#)

[P21 - Framework for 21st Century Learning:](#)

[AAC&U - Essential Learning Outcomes](#)

[EDC - Work Ready Now](#)

[Institute for the Future : Future Work Skills 2020](#)

[Common Employability Skills](#)

[Connecting Credentials Framework](#)

[Community Colleges and 21st Century Skills: Skills Panels to Assist Student Career Success](#)

[Credential Transparency Initiative](#)

[A Framework for Extending the Transcript](#)

[America's colleges are getting a bad rap on the skills gap](#)

[Preparing Students for the Workforce: Six co-curricular opportunities for experiential learning](#)

### ***Digital Badging***

[Six Steps to Building High-Quality Open Digital Badges](#)

[EDUCAUSE: 7 Things You Should Know about... Badges](#)

[Where Badges Work Better](#)

[We Don't Need No Stinking Badges... Or Do We?](#)

[Evidence of Learning: Understanding the Supplier Ecosystem](#)

[Open Badges in Higher Education](#)

[Open Badges for Higher Education](#)

[How Badges Really Work in Higher Education](#)

[IMS Global: Enabling Better Digital Credentialing](#)

### ***Digital Badging Examples in Higher Ed***

[Purdue Passport](#)

[Penn State](#)

[Arizona State University](#)

[University of Michigan M-BLEM](#)

[Seton Hall University](#)

[Notre Dame](#)

[Foundation for California Community Colleges](#)

[Deakin University](#)

[Brandman University](#)

[OPEN SUNY](#)

[LaGuardia Community College](#)

[Colorado State University](#)

[Beuth University](#)

[Georgia Southern University](#)

### ***Badging & Career Readiness***

[Digital Badging Pilot Based on Career Readiness Competencies](#)

[What Employers Think of Badges, Nanodegrees from Online Programs](#)

[Employer Perceptions of Critical Information Literacy Skills and Digital Badges](#)

[Digital Badges Certify Competencies Gained through Student Clubs](#)