



**AETC/A3BA Accreditation and Certification
Digital Badging
Playbook**

TABLE OF CONTENTS

<i>Purpose of Digital Badging Working Group</i>	<i>3</i>
<i>How Digital Credentials and Digital Badges Work</i>	<i>3</i>
<i>The Future.....</i>	<i>4</i>
<i>Leadership Drives Success</i>	<i>4</i>
<i>The Badging Construct</i>	<i>5</i>
<i>Language of Digital Credentials</i>	<i>6</i>
<i>Digital Credentials Standards</i>	<i>6</i>
<i>Minimal Standards and Framework</i>	<i>6</i>
<i>Credential Metadata</i>	<i>7</i>
<i>Basic Metadata Fields</i>	<i>7</i>
<i>Digital Badging Model (DBM)</i>	<i>7-8</i>
<i>Appendix A: Creating a Digital Credential System Checklist</i>	<i>9</i>
<i>Appendix B: Digital Badging Glossary</i>	<i>10-16</i>
<i>Appendix C: Digital Badging Process Flow Chart</i>	<i>17</i>
<i>Appendix D: Digital Badging Frequently Asked Questions (FAQs)</i>	<i>18-19</i>
<i>Appendix E: Overview of a Digital Credential (Terms & Value).....</i>	<i>20</i>

Purpose of Digital Badging Working Group

This group is convened to develop a digital badging system within the Air Force Specialty Code (AFSC) career field to provide clarity to both Airmen and Leadership on the skills members currently possess and the development gaps to focus on in terms of mission readiness. Process consists of six different groups.

- Career Functional Manager (CFM)
- Working Group (WG)
- Small Group (SG)
- Individual Group (IG)
- MAJCOM Functional Manager (MFM)
- Review Group (RG)

WG group meetings will be twice a week 2 hours per meeting. The process can take two to three months.

How Digital Credentials Work

Digital credentials visually represent skills and achievements earned by an individual through specific projects, programs, training, on-the-job experiences, or other activities. Digital credentials empower individuals to take their learning with them wherever they go to build a rich picture of their lifelong learning journey.

Digital credentials are unlike a traditional learning history for several reasons. Traditionally, learning histories have been in the form of a college or university transcript or a paper certificate of completion from a workshop, training or non-credit course. Additionally, these traditional learning histories were challenging to share once an employee or student leaves their organization.

In contrast, digital credentials are portable and transferable in that they can follow a learner through multiple organizations or within departments in global organizations. The credentials provide consumers* with access to the underlying data embedded within the digital icon which is referred to as metadata. As the earners* move between engagement teams, lines of service, territories, or even different employers, digital credentials make it easy to share their knowledge, skills, abilities and experiences. Digital credentials connect the issuer* and the earner through verification of that earner's learning, achievement, or skills based on the credential criteria and evidence.

*For definitions see Appendix B: Digital Badging Glossary.

Numerous organizations across the world already issue digital credentials, including non-profits, professional organizations, employers, and all levels of educational institutions. The practices that make up a credential system will need to make the recommendations about the learning that happens and measure it in the appropriate way. A digital badging system that adds value to the organization includes the functions below:

- Recognizing learning – Organizational decisions regarding what learning matters and how the learning will be packaged so that earners can take advantage of their value
- Assessing learning - Organizational decisions regarding how recognition is or isn't paired with appropriate assessment practices that trigger credentials and is paired with decision regarding how (if) the organization is collecting the appropriate evidence associated with the assessed learning.
- Motivating learning - Organizational decisions in *Recognition* and *Assessment* impacts how learners will be motivated to participate and the social dynamics that will affect the credential ecosystem.
- Studying learning - Organizational decision in *Recognition*, *Assessment* and *Motivation* determines the appropriate research practices to figure out how the overall credential system will operate, as well as how to improve and inform the organizational knowledge about how the new digital credentials function in the wider credential ecosystem.

The value of digital credentials increases when the issuer can “stack” credentials into collections to demonstrate multiple achievements, often referred to as aspirational skilling or future skilling. The Open Badge V2.0 Standard allows individuals to demonstrate skill mastery across various issuers; manage the respective digital credentials in a collection (also known as a secure profile, skills wallet, or skills backpack); and share them on professional social media platforms such as Twitter, Facebook, and LinkedIn.

For this project, A3B has partnered with Credly, the forerunners in the digital credential movement. Credly works with leading technology companies, service providers, and industry organizations who are similarly focused on the value of verified skills and achievements.

The Future

There is enormous potential for digital credentials to have further impact on the education, training, and workforce sectors within the Air Force. Digital credentials will be widely used to encourage learning and to provide real and tangible information to supervisors to best inform them of the talents, skills, and achievements of Airmen seeking professional growth and new opportunities.

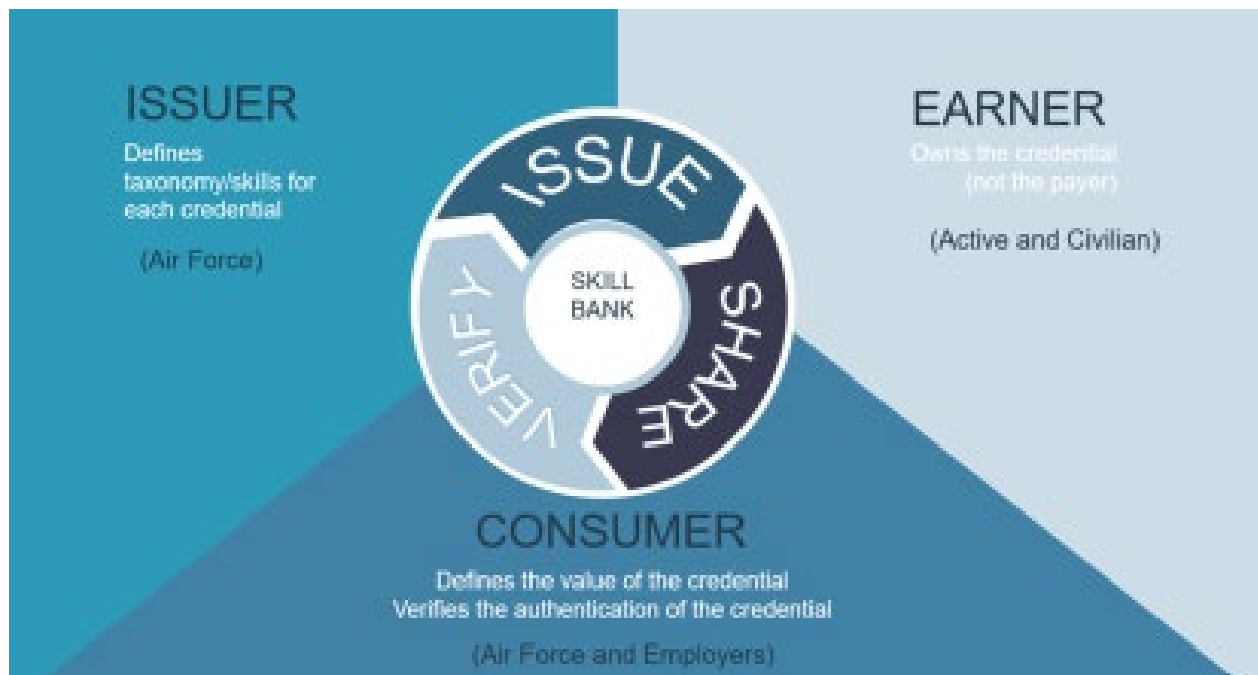
Leadership Drives Success

Well-functioning digital credential ecosystems rely on an exchange between three key parties: (1) the credential issuer (the organization/unit that recognizes achievement in an individual), (2) the credential earner (the Airman passing the test, demonstrating the skill or earning the certification) and (3) credential consumer (leadership, who will offer an opportunity to the Airman on the basis of their earned credential).

All three of these parties must understand and place value on the digital credential for the ecosystem to flourish. Digital credentials empower credential earners to better articulate their skills, promote themselves professionally, and to communicate the value of their credentials within the ecosystem.

Introducing digital credentials to an organization takes a team and is not a one-person show. Ensure a designated credential lead, where the answer to any question stops with them and they are truly a credential champion. From there, select a blend of internal and external team members to support the initiative. Internal team members can be selected within one unit or location, and external support can come from other organizations and locations. It is important to remember, a functioning digital credential ecosystem requires buy-in from within and outside an organization, as well as from both leaders and Airmen who will actively engage with the badging program. The credential team members serve as the primary points of contact for Airman engagement and are the primary digital credential champions within the organization.

The Badging Construct



Once the team is in place, the first step in starting the digital credential journey is to summon the team to discuss and create a vision for the Digital Credential Initiative. The point person responsible for creating the vision can be a senior administrator or the project lead, but it must be someone who can make decisions and have the decisions acted upon. Career Functional Manager or a Subject Matter Expert for the specialty/series are recommended.

To help frame the vision, it is important to keep in mind that digital credentials need to demonstrate value for all three stakeholders (issuer, holder, and consumer). To build a workforce relevant system, the team should ask themselves these key questions:

- **WHY** award a digital credential for knowledge, skills and abilities?
- **HOW** does the credential benefit those who earn it?
- **WHAT** key information does the credential convey to earner and **WHAT** key information does it convey to other critical stakeholders?

Once these questions are answered, it will help shape a powerful mission and vision for the digital badging program. Many organizations start crafting their digital credential strategic mission and vision with the belief that by issuing digital credentials they hope to drive interest and increased engagement in training and development activities. What they find, after launching digital credentials is that digital credentials provide opportunities to learn, gain skills, and gain recognition for the exact knowledge, skills and abilities that the organization needs. Digital credentials help organizations capture new skills as they emerge and demonstrate a commitment to transforming how organizations operate and deliver value.

At the start of a credential journey, it is of utmost importance for an organization to have a clear vision. The vision should answer the why, how or what needs to happen within the organization.

Language of Digital Credentials

Digital credentials have their own language, which may be unfamiliar to many Airmen, so it is important that everyone on the working group understands and uses the same language. To help start using the same language a list of commonly used words and their definitions is included in this document. (See Appendix B: Digital Credential Glossary.)

Digital Credentialing Standards

There are typically pitfalls when trying to get new technologies to work together under a single organization and digital credentials are no different. Organizations face challenges including how to quantify a credential's value, ensure its security, establish credibility, and make sure people take credentials seriously. Credentials need to be meaningful, based on a stated internal or external standard or they could be considered useless. Standards and leveling sections in a governance plan ensure consistency and value to the digital credentials.

Minimum Standards and Frameworks

Adherence to rigorous agreed-upon standards ensures credibility of the digital credential and establish a foundation of trust as organization branded digital credentials are awarded within, across and between units and organizations. When developing minimum standards and frameworks a list of questions like the ones below are helpful:

- What minimum standards exist for ensuring a credential is in line with organizational standards?
- How does the new credential relate to existing credentials, certificates, licenses and degrees?
- How are individual credentials slotted into a hierarchy or taxonomy of credentials?
- What types of digital credentials will be allowed? (i.e., recognition, knowledge based, skill based, role based, performance based, etc.)
- What might be the on- or off-ramp opportunity the credential will provide?
 - Create credentials for small accomplishments to hook earners
 - Providing an on-ramp for skills acquisition will make easier for earners
 - Keep in mind current learning opportunities for example stackable badges
 - Are digital badges adding a new or duplicating an already existent function

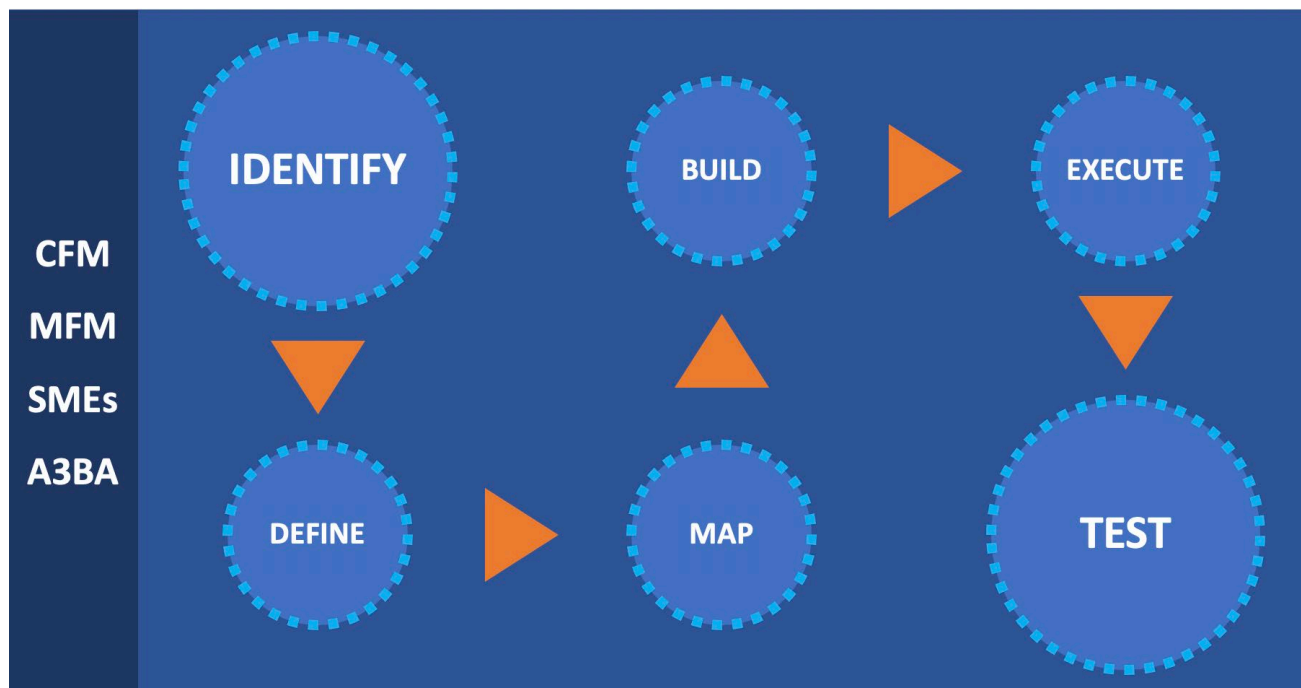
Credential Metadata

Credential metadata is the content created to represent the credential, certification, course, or designation being badging. Metadata is what truly differentiates credentials from more traditional documents i.e., transcripts, resumes, certificates and gives a digital credential its value; the richer the metadata, the more value the credential will hold for the earner and credential viewer. Metadata should describe what the earner is capable of doing after earning this credential, what they had to do to earn it and why leadership should care about it.

Basic Metadata Fields

- Credential Name or Title
- Credential Description (the brief narrative explanation of what the earner is capable of or competent in doing)
- Skills Tags (1-3 word keyword phrases that allow viewers to quickly understand what the earner has either acquired or demonstrated)
- Criteria (brief descriptive and visual representation of what the earner did to earn credential)
- Credential Attributes (type, mastery level, time, cost)

Digital Badge Model (DBM)



The DBM is a 30K' view of the major steps needed to develop digital badges for the supported AFSCs in the CRADA. The model presents a simple and ideal use case that is flexible to the needs of each audience. The steps are not all-inclusive. Thus, steps may overlap, combine, collapse, follow a different sequence, and/or run in series or parallel. Detailed meeting actions also support a meeting-by-meeting recipe for developing digital badges.

DBM Steps

1. Identify:
 - a. Audience
 - b. Roles:
 - i. SMEs
 - ii. Issuers
 - iii. Earners
 - iv. Consumers
 - c. Working Groups
 - d. Industry Partners
2. Define:
 - a. Value Proposition (WIIFM)
 - b. Skill Needs
 - c. Expectations
 - d. Timelines
 - e. Responsibilities
 - f. Communication Plan
3. Map:
 - a. Badge Stacking & Constellations
 - b. Badge Scaffolding
 - i. On & Off Ramps
 - ii. Micro & Macro Badges
 - c. Earning Pathways
 - d. Badges to KSOs
 - i. Internal
 - ii. External
4. Build:
 - a. Badge Graphics
 - b. Badge Earning Criteria
 - c. Badge Skill Tags
 - d. Badge Checklists
 - e. Badge Rubrics
5. Execute:
 - a. Badge Communication
 - b. Digital Credential Launch
 - c. Badge Issuance
6. Test, Learn, Iterate:
 - a. Collect Data:
 - i. Surveys
 - ii. Focus Groups
 - b. Report Findings
 - c. Fine Tune Process

APPENDIX A: CREATING A DIGITAL CREDENTIAL SYSTEM CHECKLIST

- ☐ Create a Team - Identify Key Players in Talent or Skill Recognition. (Assess Team KSOs)
Should the team include: Departments? Business Units? Technology? Learning and Development? HR? Leadership? Recruiting?
- ☐ Identify and Recruit Credential Champions - Identify Sponsors and Stakeholders - Assess and Prepare Sponsors (These are the key players who will not only champion the recognition strategy but ensure the initiative doesn't "fall off the radar"). Identify who has a vested interest in ensuring organizational recognition success.
- ☐ Develop a Digital Credential Vision and Mission
- ☐ Create a Shared Lexicon or Terminology Directory
- ☐ Create Earner and Issuer Personas
- ☐ Diagram Earner and Issuer Processes
- ☐ Determine Key Performance Indicators
- ☐ Develop a Governance Plan with the following:
 - Control, Authority, and Autonomy Process, Procedures and Roles
 - Data Governance and Personal Identifiable Information
 - Communications and Marketing Roles, Policy and Procedures
 - Design Branding and Credential Graphic Guidelines
- ☐ Develop a Skill Mastery Framework and Taxonomy with the following:
 - Knowledge, Skills, Ability and Competency, Standards and Leveling
 - Credential Taxonomy and Leveling
 - Credential to Licensure Hierarchy
 - Industry Standards (if appropriate)
- ☐ Develop a Change Management Plan
- ☐ Design and Deploy a Communication and Marketing Plan
- ☐ Develop
 - ☐ Credential
 - ☐ Metadata
- ☐ Go Live with Digital Credentials

APPENDIX B: DIGITAL BADGING GLOSSARY

Term	Definition
Accreditation	<i>A type of quality assurance process under which services and operations of educational institutions or programs are evaluated and verified by an external body to determine if applicable and recognized standards are met. The process in which certification of competency, skill, knowledge, or credibility is presented.</i>
Airman's Learning Record	<i>Captures and documents Airmen's knowledge and skills gained throughout the Continuum of Learning (training, education, and experiences), documents progress and achievement, and identifies gaps and opportunities for growth tied to mission accomplishment from an enterprise and individual level.</i>
Assertion	<p><i>A JSON (JavaScript Object Notation) structured representation of the data for a specific badge that has been awarded. An assertion represents a single badge awarded to a single earner – it includes information about:</i></p> <ul style="list-style-type: none"> <i>• Who earned the badge?</i> <i>• What the badge represents</i> <i>• Who issued the badge?</i> <p><i>The assertion for a badge includes various data items required by the Open Badges Specification.</i></p> <ul style="list-style-type: none"> <i>• Required data items in an assertion include: a unique ID; the recipient; the badge URL; verification data; the issue date.</i> <i>• Assertions can optionally include: the badge image; an evidence URL; an expiry date.</i> <i>• An assertion can be stored in a hosted file or a JSON Web signature.</i>

Auditing or external verification	<i>The process, either internal or external, of auditing and verifying the proper implementation of awarding credit or credentialing.</i>
Backpack	<i>A tool used to collect, share and display earned badges.</i>
Badge	<p><i>A digital representation of a skill, learning achievement or experience. Badges can represent competencies and involvements recognized in online or offline life. Each badge is associated with an image and some metadata. The metadata provides information about what the badge represents and the evidence used to support it.</i></p> <ul style="list-style-type: none"> • <i>Earners can display their badges online and can share badge information through social networks.</i> • <i>Issuers define badges and award them to earners.</i>
Badge Ecosystem	<i>Refers to the broader ecosystem (also called ecosphere or badgeosphere) of supervisors, commanders, leadership who are the audience for badges and enable digital badges to function as currency in the community. Contains all of the relevant digital badging components.</i>
Badging (Digital Badging)	<p><i>The process of awarding someone a badge denoting a particular experience, skills or competencies they have obtained for professional or personal development.</i></p> <ul style="list-style-type: none"> • <i>Digital badging enables professional communities to identify new competency areas and recognize mastery or demonstration of those competencies.</i> • <i>A signal to colleagues and to current and prospective employers a professional life of active learning, engagement, and ongoing development.</i>
Badging Platform	<i>The online tool that allows badges to be issued and earned. Examples are Credly, Badgr, Canva Badge, RedCrittter etc.</i>

Behavior	<i>An observable activity performed to achieve the objectives of the job. Behaviors may provide evidence of knowledge, skills, abilities and other characteristics.</i>
Blockchain	<i>A data structure that holds transactional records while ensuring security, transparency, and decentralization. It is a chain of records stored in the forms of blocks which are controlled by no single authority. A distributed ledger that is completely open to any and everyone on the network. Once an information is stored on a blockchain, it is extremely difficult to change or alter it.</i>
Certificate	<p><i>Broadest category. Awarded upon the successful completion of a brief course of study.</i></p> <ul style="list-style-type: none"> <i>Sometimes issued for participation or completion, other times for attainment of competencies.</i> <i>Used at many levels of knowledge and skills, ranging from foundational skills to learning at the post-graduate level.</i>
Certification	<p><i>Indicate mastery of or competency in specific knowledge, skills or processes that can be measured against a set of accepted standards.</i></p> <p><i>Not tied to a specific educational program, but typically awarded through assessment and validation of skills in cooperation with a business, trade association or other industry group.</i></p>
Competency	<i>The combination of Knowledge, Skills, Abilities, and Other Characteristics that manifest in an observable, measurable pattern of Behaviors.</i>
Competency Assessment	<i>the process of collecting and judging evidence to measure a person's competency level.</i>
Competency Management System (CMS)	<i>A method of tracking, categorizing, assigning, assessing competencies identified in models.</i>
Competency Model	<i>A collection of competencies that together define successful performance in a particular work setting.</i>

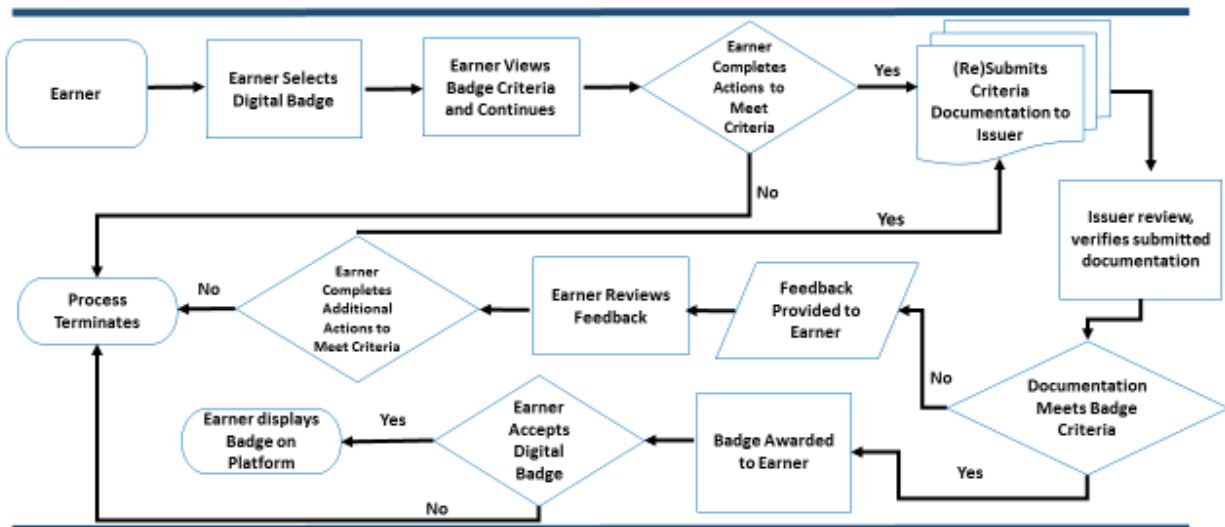
Competency Rubric	<i>Presents the definition of a single competency or sub-competency and distributes its observable behaviors in a table that lists multiple proficiency levels along a developmental scale.</i>
Consumer	<i>A person or group who is the intended audience/viewer of a badge Earner's badges. Someone viewing a badge awarded to an earner. Examples could include supervisors, commanders, instructors and potential employers.</i>
Credential	<i>Document, certificate or qualification recognizing attainment of measurable skill. Evidence or proof of qualification, competence, or skill issued to an individual by a third party with a relevant authority or assumed competence to do so.</i>
Criteria	<i>Principles or standards by which something may be judged or decided. A definition of the requirements for earning a badge.</i> <ul style="list-style-type: none"> <i>A badge may be associated with multiple criteria</i> <i>Criteria can be required or not</i> <i>Criteria must be associated with a description and indication of acceptable evidence.</i>
Developer	<i>Groups or organizations that create programs where badges can be designed and issued.</i>
Developmental Special Experiences (DSE)	<i>Immersive competency-based learning activities outside the scope of Air Force formal training that have been validated as a potential means for Airmen to obtain specific institutional, occupational, or joint competencies. Airmen will be provided multi-domain and joint opportunities, external to assignments, to provide the appropriate experiences and exposure to earn competencies.</i>
Displayer	<i>The place where the badge is displayed.</i>
e-Catalog	<i>An electronic catalog that contains all opportunities for training, education, and developmental experiences within the Air Force.</i>
E-Portfolio	<i>A digital collection of electronic evidence created and managed by a user online. Files,</i>

	<i>images, links, and other data are typically stored in the portfolio. E-Portfolios are used to store and display digital badges.</i>
Earner	<i>A person who has met the necessary requirements to earn a badge or micro-credential. Earners can apply for badges through issuing organizations or individuals (also referred to as issuers). Someone who has earned or is seeking to earn a digital badge. The person receiving the digital badge.</i>
Endorsement	<i>Adds a layer of external validation that further supplements a badge's metadata and can help earners to understand which badges might have greater social or professional currency.</i>
Evidence	<i>Submitted proof that an earner meets the criteria for a badge they are applying for. Can be links, text, images, and other media.</i>
Experiential-Learning	<p><i>A process through which one develops knowledge and skill from direct experience outside a traditional academic setting. This can include internships and other professional work experiences.</i></p> <p><i>Well-planned, supervised, and assessed experiential learning programs can promote interdisciplinary learning, civic engagement, career development, cultural awareness, leadership, and other professional and intellectual skills.</i></p>
Foundational Competencies	<i>Competencies that are valued by the Air Force and are universally applicable to all Airmen (Officer, Enlisted, and Civilian).</i>
Issuer	<i>Person or organization who creates /offers badges and issues them to earners. Issuers can be individuals or organizations. The person or organization who awards digital badges once evidence is provided demonstrating the criteria has been met. In some cases, the issuer also serves as the validator. The entity creating the badge (educational institutions, government agencies, private organizations, etc.).</i>

License	<p><i>Legal permission to allow an individual to perform certain regulated tasks or occupations.</i></p> <ul style="list-style-type: none"> • <i>Based on some pre-determined and standardized criteria, involving educational programs of study, assessments, and/or work experience.</i> • <i>Time-limited and must be renewed periodically and often carry a continuing education requirement.</i>
Metadata	<p><i>Information contained within a badge that defines it. It includes name, description, and links to other important details like the badge's criteria, evidence and issuer information.</i></p> <p><i>Metadata provides information about what the badge represents and the evidence used to support it. Metadata is structured information that describes, explains, locates, or otherwise makes it easier to retrieve, use, or manage an information resource. Metadata is often called data about data or information about information. (National Information Standards Organization).</i></p>
Micro-credential	<p><i>Collection of recognized competencies that can be displayed as digital badges.</i></p> <ul style="list-style-type: none"> • <i>A subset of specific knowledge, skills or competencies that is part of a larger progression of learning. Micro-credentials are digital credentials that are shareable and personalized.</i> • <i>A granular certification that an individual has mastered certain skills or competencies, earned through the completion of short and purposeful skills-based learning experiences.</i>
Occupational Competencies	<i>Competencies that are required of all Airmen within a specific workforce category.</i>
Proficiency Level	<i>The degree to which an individual has mastered a competency.</i>
Registrar	<i>Responsible for maintaining the e-catalog and validating learning opportunities that are</i>

	<i>reviewed for potential inclusion in an Airman's Learning Record.</i>
Rubric	<i>A set of criteria used for assessing a particular kind of work or performance.</i>
Tags	<p><i>Tags are alternate terms or phrases to describe the badge's topics, competencies, or type of achievement.</i></p> <ul style="list-style-type: none"> <i>• Intended to help badge consumers and potential badge earners find relevant badges. As such, the tag field should contain as many relevant keywords as will be helpful.</i> <i>• Examples of tags may include but are not limited to: programming, instructional design, learning analytics, assessment development, volunteer work, and many others.</i>
Validator	<i>The person or organization who checks the criteria and evidence for a badge. The validation provided is essential to building trust in the validity digital badges issued.</i>
Viewer	<i>The person viewing/reviewing the earned badges.</i>

APPENDIX C: DIGITAL BADGING PROCESS FLOW CHART



APPENDIX D: DIGITAL BADGE FREQUENTLY ASKED QUESTIONS (FAQs)

Question	Answer
What is a digital badge?	<p><i>A digital badge is a web-enabled version of a credential, certification or learning outcome which can be verified in real-time, online. A digital badge can represent knowledge, skills, and observable behavior involvements recognized in online or offline life. Each digital badge is associated with an image and some metadata. The metadata provides information about what the badge represents and the evidence used to support it.</i></p> <p><i>Badges are an alternative form of credentialing popular in learning contexts. It is important to note that a digital badge recognizes learning and growth wherever it happens and helps people connect their accomplishments across institution types.</i></p>
What is digital badging?	<p><i>Digital badging is the process of awarding someone a digital badge denoting a particular experience, skills or observable behaviors they have obtained for professional or personal development.</i></p> <p><i>The digital version of your credentials. The digital image (badge) contains verified metadata that describes your qualifications and the process required to earn your credential. The technology enables you to manage, share and verify your knowledge, skills, and observable behaviors digitally.</i></p>
How does my credential get displayed as a badge?	<p><i>A badging platform, translates the learning outcomes you've demonstrated into a badge which enables you to manage, share and verify your credentials digitally.</i></p>
What are the benefits of a badge?	<p><i>Representing your skills as a digital badge gives you a way to share your abilities online in a way that is simple, convenient, trusted and can be easily verified in real time.</i></p> <p><i>Digital badges provide peers, supervisors and leadership concrete evidence of what you had to do to earn your credential and what you're now capable of.</i></p>

How will I know if I've earned a badge?	<i>After you have successfully completed the criteria, you will receive an email notification from the issuer with instructions for claiming your digital badge and setting up your account.</i>
What if I don't want my badge to be public?	<i>Privacy settings in the badge platform can be configured to control or limit information made available to the public.</i>
How are badges different from résumés and Curriculum Vitae (CVs)?	<i>Resumes and CVs are static, so need to be continually updated. Badges are inherently dynamic and so create a constantly evolving picture of a person's development - particularly since they can be integrated into automated systems. Badges can also represent a much more detailed picture than a CV or resume typically would.</i>
How do people know what a badge represents?	<i>The data for an awarded digital badge includes a link to the badge class information, which includes descriptions of what the badge represents.</i>
How does my credential get displayed as a badge?	<i>Learning outcomes you've demonstrated are translated into a digital badge and are issued and managed through a Platform. The Platform is based on the Open Badge Standards maintained by IMS Global. This enables you to manage, share and verify your credentials digitally.</i>
What's to keep someone else from copying my badge and using it?	<i>While badges are simply digital image files, they are uniquely linked to data hosted on the Acclaim platform. This link to verified data makes them more reliable and secure than a paper-based certificate. It also eliminates the possibility of anyone claiming your credential and your associated identity.</i>
Can I import badges issued from other platforms?	<i>Not at this time.</i>

APPENDIX E: OVERVIEW OF A DIGITAL CREDENTIAL

Digital Credential Terms & Value

