

INFORMS ANALYTICS FRAMEWORK (IAF): THE ROADMAP FOR THE CERTIFIED ANALYTICS PROFESSIONAL (CAP)



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for a Better World

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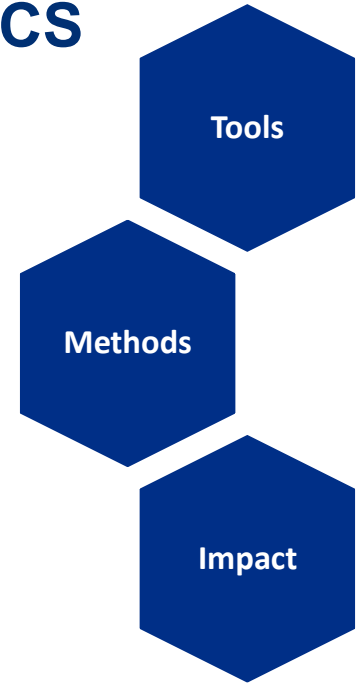
WHAT DEFINES A PROFESSIONAL ANALYTICS CAREER?

Analytics is no longer just about tools.

Leading organizations expect professionals who can:

- Identify and define the **right problem**
- Work with **messy real data**
- Apply appropriate **analytics methods**
- Translate results into **business decisions**
- Sustain business **outcomes**

CAP® certification formalizes these competencies and connects academic programs with industry expectations.



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WHAT IS CAP®?

CAP is the leading global certification for analytics professionals

Rooted in the **INFORMS Analytics Framework**, **CAP** evaluates professionals across the **full analytics lifecycle**:

- Business Problem Framing
- Analytics Problem Framing
- Data Acquisition & Preparation
- Methodology Selection & Model Building
- Deployment & Lifecycle Management
- Communication of Insights

Supports career growth through both exam-based and experience-based certification levels

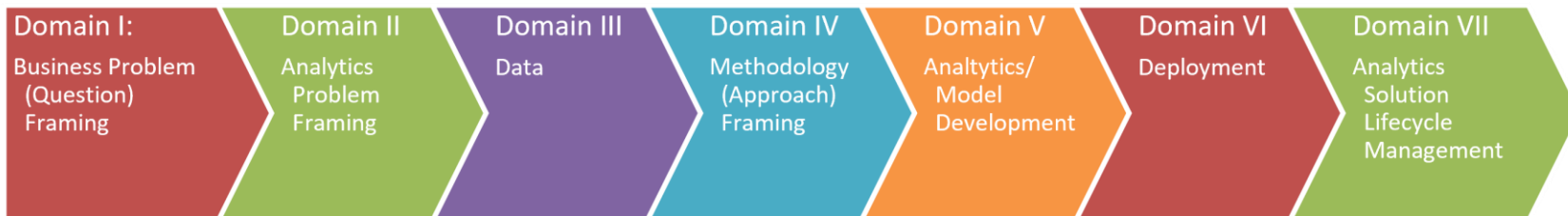


THE INFORMS ANALYTICS FRAMEWORK



A structured, end-to-end process for analytics work.

It defines steps needed to produce clear, aligned, business-ready analysis.



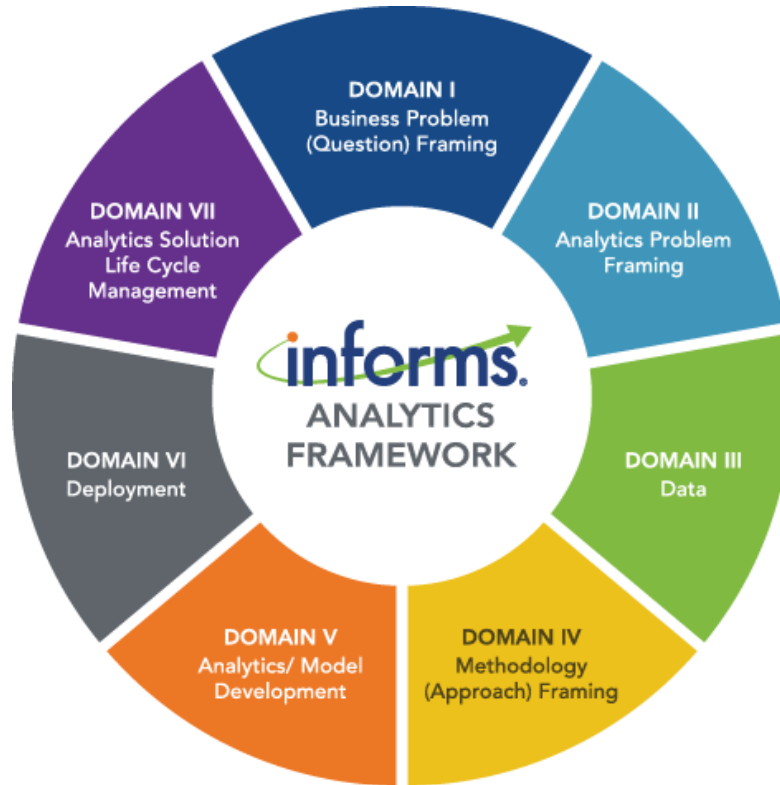
What makes the INFORMS Analytics Framework different:

- It's a methodology, not tools. Other analytics training teaches Python, Tableau, SQL. IAF teaches the **process** those tools plug into.
- It's a complete framework with clear domains, responsibilities, and checkpoints critical to every analytics initiative. Internal mentoring rarely offers this structure.
- It creates a **common language** across the team, not just individual skill-building.



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THE INFORMS ANALYTICS FRAMEWORK



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WHY THE INFORMS ANALYTICS FRAMEWORK?

Without structure:

Analytics projects often start with data, tools, or models rather than a clearly defined problem

The Framework provides:

- ✓ A structured end-to-end analytics process
- ✓ Alignment with business objectives
- ✓ Guidance for both new and experienced professionals

Result:

Analytics efforts that deliver meaningful organizational impact

Did you know that **60% to 85%** of analytics and data science projects *fail*?

Poor problem framing and lack of organizational alignment are cited as the top reasons for failure across reports from Harvard Business Review and Gartner.

HARVARD
BUSINESS
REVIEW

 CERTIFIEDANALYTICS.ORG

*The INFORMS Analytics Framework ensures analytics begins with the **right problem** and ends with **actionable decisions**.*



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A CERTIFICATION FOR EVERY LEVEL

Provides certification pathways aligned with career progression

Exam-based



Foundational-career certification on core analytics and business understanding



Mid-tier certification on effective analytics management and execution

Exam + Experience



Advanced-level with strategic leadership and business impact
ANAB Accreditation



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CAP-E/P: HELPS GRADUATES STAND OUT

For Students

A way to demonstrate readiness for analytics careers

- ✓ Validates knowledge of the **analytics lifecycle and professional practices**
- ✓ Signals **job-market readiness** to employers
- ✓ Differentiates graduates in a **competitive analytics labor market**
- ✓ Provides an **entry point to the CAP professional certification pathway**

For Universities

Recognition for preparing analytics-ready graduates

- ✓ Aligns curricula with the **INFORMS Analytics Framework**
- ✓ Demonstrates that programs prepare students for **industry-recognized competencies**
- ✓ Provides a **visible credential for graduates**
- ✓ Strengthens the program's reputation with **employers and industry partners**



Education



Certified
Competence



Career
Differentiation



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CAP-E VERSUS CAP-X

Domain	CAP-E	CAP-X
Business Problem (Question) Framing	Identification of specific aspects within business scenarios	Overall process of defining, analyzing, and solving business problems using analytical methods
Analytics Problem Framing	Concentrates on the internal composition of a problem statement	Requires a comprehensive understanding of the problem statement and considering its implications, risks, and the broader context of client needs and organizational goals
Data	Data handling and quality at a granular level	Considers data strategy, governance, and its impact on broader organizational goals
Methodology (Approach) Framing	Detailed technical knowledge and application of various analytics methods	Deeper integration of technical knowledge with strategic business understanding, risk assessment, and broader technology consideration
Analytics/Model Development	Emphasizes the construction, interpretation, and presentation of analytics models	Requires a comprehensive understanding of analytics models, their potential issues, and their effective communication in a broader context, including the consideration of multiple models and their interplay
Deployment	Focused on the validation process and production requirements	Encompasses validation, communication, business impact assessment, documentation, and stakeholder alignment
Analytics Solution Lifecycle Management	Emphasizes the "what" and "how" of monitoring, training, and documenting analytics solutions	Requires a comprehensive understanding of analytic solutions in a broader context, including their long-term performance, potential alternatives, business impacts, and ethical considerations

WHY CAP MATTERS FOR UNIVERSITIES

Recognition for preparing analytics-ready graduates

- ✓ Provides clear industry standard for analytics competencies
- ✓ Aligns curricula with real-world analytics practice
- ✓ Prepares students for professional certification and career readiness
- ✓ Bridges the gap between technical analytics skills and business decision-making



THE CAP DIFFERENCE

Holistic (Breadth and Depth)

- End-to-end Analytics Process

Industry and Technology Neutral

- Not tailored to an industry, technology, vendors

Trusted benchmark

- Administered by INFORMS

Life-cycle program

- Certification path

Accredited and Recognized

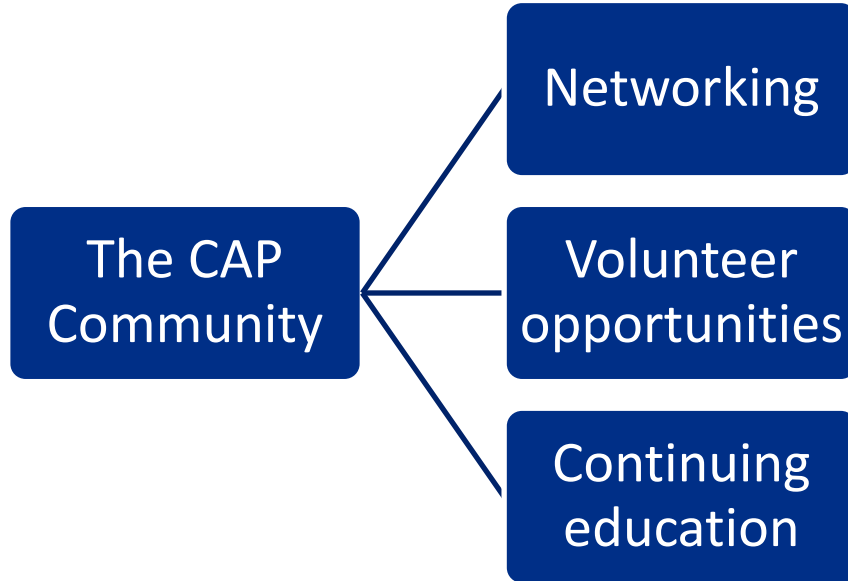
- ANAB accreditation (CAP-X)

A TRUSTED, VENDOR-NEUTRAL STANDARD



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A COMMUNITY FOR GROWTH



Analytics doesn't end when the model works.

That's why **Deployment** and **Lifecycle Management** are core domains in the INFORMS Analytics Framework.

Validate. Deploy. Monitor. Improve.



 [CERTIFIEDANALYTICS.ORG](https://certifiedanalytics.org)

FACTS ABOUT INFORMS

Total Members: 12,000+ worldwide

Global Presence: Members from nearly 90 countries

Professional Communities:

- 13 Societies
- 22 Sections
- 7 Forums
- 21 Regional Chapters
- 62 Student Chapters

Certified Analytics Professional (CAP):

- INFORMS administers CAP® credential at three levels, Essential, Professional, and Expert

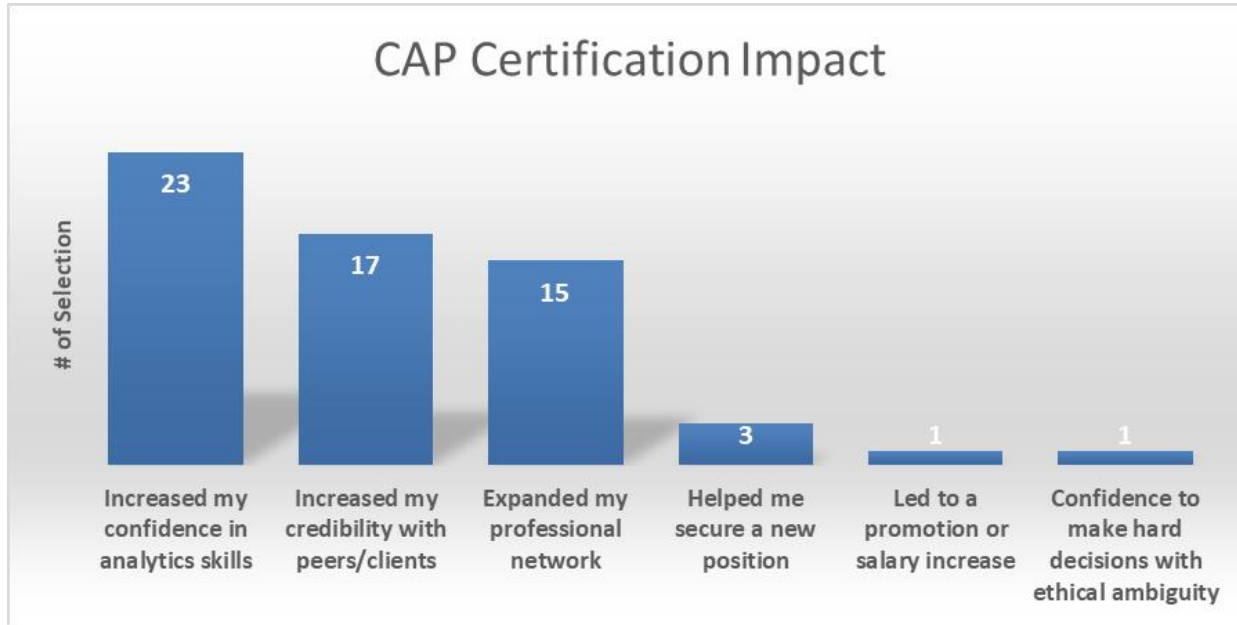
Publications & Events:

- 17+ peer-reviewed journals
- International conferences drawing participants from 30+ countries



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SELF-CONFIDENCE, CREDIBILITY, AND NETWORKING ARE THREE MOST SELECTED CAP IMPACT



IS IT WORTH IT?

Are data analytics certifications *worth it*?

- > Do they give you a proven framework for delivering analytics that actually gets used?
- > Do they strengthen both technical expertise and business insight?
- > Do they confirm you approach problems like elite analytics teams?



 CERTIFIEDANALYTICS.ORG



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Even the best analysis doesn't always make an impact. It's often a matter of misaligned expectations due to poor problem framing.

Impactfulness is not just about technical skills. It's about understanding the bigger picture and asking the right questions from the very beginning.



Mikhail Flom, MS, CAP-X

Chief Data Scientist
VBA VICCS Benefits Transformation
Platform



A COMPLETE PROFESSIONAL STANDARD

Ethics
+ Exam

= CAP-E

Ethics
+ Exam
+ Experience
+ Education
+ Effectiveness
= CAP-X

CAP-X



CAP-X
needs 30 PDUs
every 3 years

Category	PDUs Allowed
Formal Education & Training	8-10
Self-directed Learning	0-10
Creating New Analytics Content	0-10
Volunteer Service	0-10
Work Experience	0-15 (5/year)

TAKEAWAYS

Bridging Education and the Analytics Profession

- ✓ A structured analytics framework
- ✓ A trusted professional certification
- ✓ A credential that helps graduates stand out
- ✓ A way for universities to demonstrate industry alignment



CAP connects academic preparation with professional analytics practice.



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CAP Academic Pathway Program Evolution



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FROM ASSOCIATE TO ACADEMIC CAP

The CAP Academic Pathway is evolving to a bundled credential offering into a **flexible, modular program** that empowers academic institutions to align with the **INFORMS Analytics Framework** and deliver outcomes that reflect industry standards for analytics project success. The new **CAP Academic Graduate Graduate** credential will serve as a dual reflection:

- Of the **individual learner's capabilities**, and
- Of the **academic program's alignment** with the INFORMS Analytics Framework

This shift positions the Academic CAP not just as a personal credential, but as a **programmatic endorsement**, signaling that the institution's curriculum aligns with INFORMS standards for analytics project success.

THE INFORMS ANALYTICS FRAMEWORK: THE PATHWAY'S NORTH STAR

At the heart of the new Pathway program is the **INFORMS Analytics Framework**, a rigorously developed, community-validated best practice structure that provides repeatable practices and methods to avoid pitfalls and realize successful achievement in every analytics initiative. The framework is the basis of the competencies, tasks, and subtasks essential for analytics professionals and validated across three levels of certification: CAP-Essentials, CAP-Pro, and CAP-Expert

Why It Matters:

- It is comprised of seven sequential, yet highly iterative, domains necessary for **analytics project success**—from business problem framing to deployment and lifecycle management.
- It is used by **hiring managers, HR professionals, and academic institutions** to benchmark skills and design curricula.
- It ensures that students are prepared for **real-world analytics roles** and that programs are aligned with **industry expectations**.

CAP ACADEMIC: A DUAL ENDORSEMENT

The **CAP Academic Graduate** credential serves as a dual endorsement, recognizing both the **learner's capabilities** and the academic **program's alignment** with the INFORMS Analytics Framework.

This dual validation **provides employers with confidence** that graduates are prepared to contribute immediately to professional analytics roles. It also enhances the institution's reputation, signaling that its **curriculum is benchmarked against a globally recognized industry standards**. For students, it offers **a credential** that reflects both personal achievement and the strength of their academic training, positioning them for career advancement and professional recognition.



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BASE PATHWAY OFFERING

The **new CAP Academic Pathway** program will consist of the following base offerings:

- ✓ CAP Academic Graduate Credential (& associated badge)
- ✓ Foundation of Data Ethics course (& associated badge)
- ✓ Business Problem Framing course (& associated badge)
- ✓ INFORMS Analytics Body of Knowledge (Institutional Access)

What happened to INFORMS membership?

- INFORMS noted low engagement and retention past the first year of included membership.
- Accounting best practices indicated a need to offer it as an optional stand-alone product.

Pathway program focused on relevant , real-world skills with digital validation that that future employers can see.



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PROGRAM OUTCOME ALIGNMENT

INFORMS provides a **Program Alignment Tool** to help institutions:

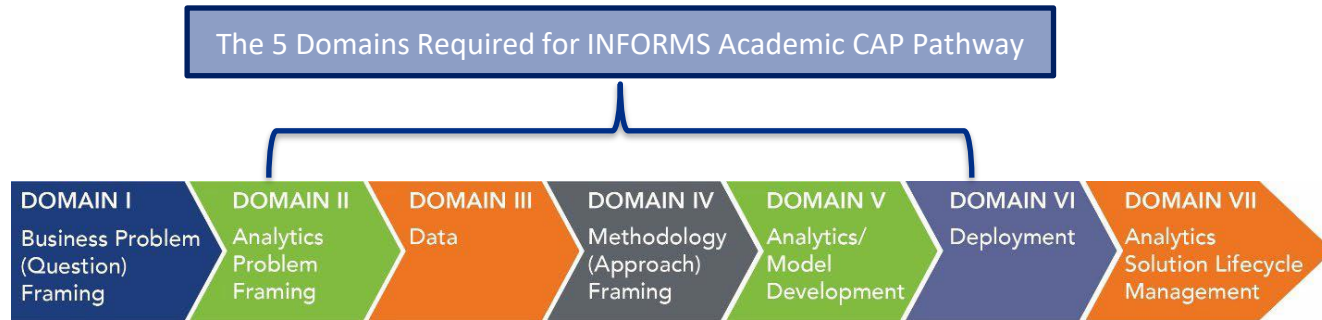
- Map their curriculum to the **CAP Domains**, especially Domains 2-6
- Demonstrate alignment with the INFORMS Analytics Framework as part of the credentialing process.
- Explore the **Exam Blueprints** for each the three CAP exam levels and help map a graduate's next step in their certification journey.
- Ensures that the **CAP Academic credential** reflects both student readiness and program quality.
- Identify gaps to guide new curriculum development for future alignment



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DOMAIN ALIGNMENT

To ensure the outcomes of the CAP align with each program's curriculum, INFORMS has developed a set of straightforward guidelines for program alignment. Each program should align with five of the seven CAP Domains, with specific emphasis on Domains II through VI.



INFORMS recognizes the important role that job experience plays in their professional development, and Domain's I and VII represent the knowledge areas often gained via work experience. As such, they are de-emphasized in the aCAP Pathways program. However, It is crucial to understand the role problem framing plays in analytics application even without real world experience with it, so we added a Business Problem Framing course to the Pathway.



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PRICING

Rates - CAP Academic Pathway	
-CAP Academic Graduate Credential (digital badge)	
-Foundation of Data Ethics course (digital badge)	
-Business Problem Framing course (digital badge)	
-Analytics Body of Knowledge (Institutional Access)	
Pathway Student-Pay rate	\$139
Pathway University-pay rate	\$119
INFORMS Membership	\$44 /student
Pathway 360 and Additional INFORMS Products	Contact Bill Griffin bgriffin@informatics.org

Pathway rates can be **paid:**

- ✓ By the **University**
OR
- ✓ By the **Student**

While not bundled with Pathway, INFORMS membership can be purchased.