



Social Security Administration
Analytics Center of Excellence



ACE Organization Development &
Advanced Analytics Talent Management

December 2016

Analytics Center of Excellence - Overview

What is ACE?

The Analytics Center of Excellence (ACE), is a centralized group of highly skilled experts that offers a wide spectrum of data analytics services at the Social Security. ACE is a sub-component within the Office of the Chief Strategic Officer.

What are ACE's mission and objectives?

ACE seeks to nurture and promote a culture of evidence-based policies and decision-making across the agency.

ACE's goal is to help the agency

- derive value-added insights from its vast information assets and
- promote innovation through advanced analytics.

To accomplish this, ACE is

- Assisting to increasing agency analytics competency and capabilities
- collaborating with business owners and technology experts to perform insightful analyses of agency data and
- delivering actionable analytics that will drive strategic objectives, improve performance and promote operational excellence

Establishing ACE Organization

- ACE was formalized as an organization and a sub-component within the Office of the Chief Strategic Officer
- ACE was given the authority to hire
 - Decided on a phased hiring approach
- Developed a hiring strategy
 - Conducted market analysis of data science positions
 - Developed job analysis for advanced analytics practitioner positions
 - Developed position descriptions for advanced analytics
 - Announced job postings
 - Developed technical, behavioral, and critical thinking type interview questions
 - Assembled an interview panel of advanced analytics practitioners across the agency
 - Developed evaluation criteria for candidate assessment

ACE Staffing

ACE Staffing Strategy included obtaining a combination of

- External candidates with advanced data science skills
- Internal candidates for institutional knowledge

STAFF COMPOSITION & CHARACTERISTICS

JOB TITLE	GRADE
Sup. Operations Research Analyst	GS-15
Management Analyst	GS-14
Operations Research Analyst	GS-14
Operations Research Analyst	GS-13
Economist	GS-13
Mathematical Statisticians	GS-13
Mathematical Statisticians	GS 9-12(Ladder)

ACE Staff Training



ACE staff training strategy included developing a comprehensive training package for our analysts to enable them become productive in a short time.

- We planned, organized and provided 4+ weeks of training for all ACE analysts

STAFF TRAINING	Training Offered
	Agency Overview
	Agency Organizations and Functions
	Agency Business Lines Overview
	Major Programs Overview
	Agency Data and Systems Environment
	ACE Computing Environment
	Program specific Training
	ACE Analyst Training
	Analytical Techniques and methodology Training
	Agency Analytical Tools & Environment Training

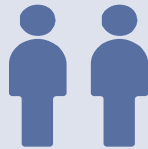


ACE Organization Development – Key Tasks & Activities

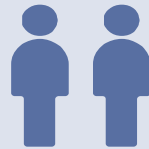
Established ACE organization, developed the operational and communication strategy

2016 RESULTS

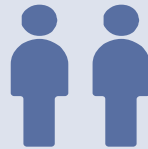
HIRED
NEW STAFF



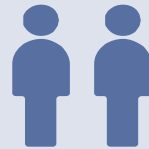
Supervisory



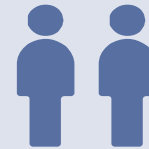
Operations Research
Analysts



Economists



Computer Scientists



Management
Analysts



Statisticians
VACANT

CREATED
OPERATIONAL
STRATEGY



Core Services



Operating Model



Analytics Maturity Model

DESIGNED
COMMUNICATIONS



Customer Segmentation



Customer Interaction



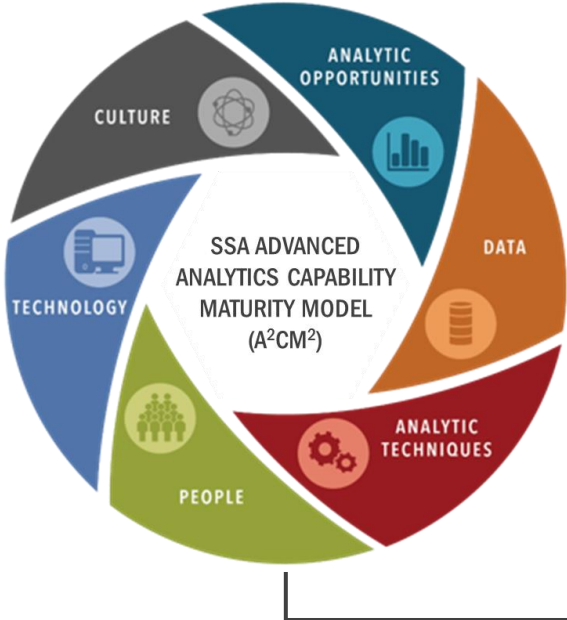
Communications Plan

SSA Advanced Analytics Capability Maturity Model (A²CM²)

Attribute: People

The A²CM² identifies the twelve critical areas of talent management

- Required for recruiting, growing and retaining advanced analytics practitioners



PEOPLE	TALENT DEFINITION	ROLE DEFINITION
		POSITION REQUIREMENTS
	TALENT RECRUITMENT	ATTRACTING TALENT
		SOURCING TALENT
		HIRING TALENT
	TALENT PLACEMENT	WORKFORCE PLANNING
		WORKFORCE MANAGEMENT
		WORKFORCE DESIGN
	TALENT DEVELOPMENT	TALENT MANAGEMENT STRATEGY
		CAREER DEVELOPMENT
		PERFORMANCE MANAGEMENT
		RETENTION STRATEGIES

Advanced Analytics Talent Management efforts

SSA/ACE efforts to develop high-performing cadre of advanced analytics practitioners and planned activities to develop, and grow this workforce

		COMPLETED	PLANNED
PEOPLE	TALENT DEFINITION	<ul style="list-style-type: none"> ✓ Developed job analysis for advanced analytics positions ✓ Developed position descriptions ✓ Created a competency assessment survey using a scientific data science competency framework ✓ Surveyed over 200+ staff to identify advanced analytics practitioners 	<ul style="list-style-type: none"> ▪ Support the development of position descriptions across the agency, as more components seek to develop their own analytics teams
	TALENT RECRUITMENT	<ul style="list-style-type: none"> ✓ Hired 15 advanced analytics practitioners ✓ Developed technical, behavior and critical thinking type interview questions ✓ Created a list of universities and schools with whom to develop recruiting pipelines 	<ul style="list-style-type: none"> ▪ Create a comprehensive talent acquisition strategy ▪ Aggregate and standardize recruiting resources such as university relationships, hiring processes, etc.
	TALENT PLACEMENT	<ul style="list-style-type: none"> ✓ Identified analytics practitioners from across the agency ✓ Developed a service model for delivery of advanced analytics services 	<ul style="list-style-type: none"> ▪ Continue to identify advanced analytics practitioners ▪ proactively track analytics skills ▪ Plan for analytics resource demand ▪ Ensure that components are able to make data-driven decision-making
	TALENT DEVELOPMENT	<ul style="list-style-type: none"> ✓ Created the Advanced Analytics Community of Interest to engage and grow practitioners (recent Open House included 200+ staff) ✓ Led the Data Science Seminar series to provide learning opportunities and share knowledge ✓ Developed ACE newsletter to recognize advanced analytics initiatives across the agency, and share analytics related news 	<ul style="list-style-type: none"> ▪ Continue to hold Community of Interest events ▪ Strengthen partnership with HR programs to leverage existing talents and resources ▪ Share lessons learned and best practices ▪ learn from industry/federal partners' experiences



Analytics Training & Workforce Skills Development

Results of Efforts in 2016

ACTIVITIES

2016 RESULTS

GRA



- Held **5** sessions of the Gerald Ray Academy on Advanced Analytics Techniques and methodology
- Trained **141** analytics practitioners and executives

TRAINING INVENTORY



- Developed an inventory of **129** analytics training courses

SKILLS CONNECT



- Leveraged subject matter experts and expertise across the agency
- We connected **9** interested participants on **4** different ACE projects

ADVANCED ANALYTICS SKILLS SURVEY

ADVANCED ANALYTICS SKILLS SURVEY FINDINGS												
TECHNICAL AREA	BASIC				INTERMEDIATE				ADVANCED			
	EXPERT	PROFICIENT	INTERMEDIATE	BASIC	EXPERT	PROFICIENT	INTERMEDIATE	BASIC	EXPERT	PROFICIENT	INTERMEDIATE	BASIC
Business Intelligence	0	0	0	0	0	0	0	0	0	0	0	0
Advanced Analytics	0	0	0	0	0	0	0	0	0	0	0	0
Big Data	0	0	0	0	0	0	0	0	0	0	0	0
Cloud	0	0	0	0	0	0	0	0	0	0	0	0
Compliance	0	0	0	0	0	0	0	0	0	0	0	0
Customer Relationship Management	0	0	0	0	0	0	0	0	0	0	0	0
Data Governance	0	0	0	0	0	0	0	0	0	0	0	0
Data Science	0	0	0	0	0	0	0	0	0	0	0	0
Data Visualization	0	0	0	0	0	0	0	0	0	0	0	0
Enterprise Resource Planning	0	0	0	0	0	0	0	0	0	0	0	0
Financial Reporting	0	0	0	0	0	0	0	0	0	0	0	0
Human Resources	0	0	0	0	0	0	0	0	0	0	0	0
Information Security	0	0	0	0	0	0	0	0	0	0	0	0
Marketing	0	0	0	0	0	0	0	0	0	0	0	0
Operations	0	0	0	0	0	0	0	0	0	0	0	0
Project Management	0	0	0	0	0	0	0	0	0	0	0	0
Research Design	0	0	0	0	0	0	0	0	0	0	0	0
Supply Chain Management	0	0	0	0	0	0	0	0	0	0	0	0
Technical Support	0	0	0	0	0	0	0	0	0	0	0	0
Training	0	0	0	0	0	0	0	0	0	0	0	0
Web Development	0	0	0	0	0	0	0	0	0	0	0	0

- The skills survey measures across **10** analytics competencies, and **4** levels of proficiency
- A total of **170+** practitioners took the survey across **4** components
- To give you some examples
 - ✓ Data Visualization had **7** experts and
 - ✓ Research Design had **18** fully performing practitioners

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