AFRL

DIGITAL
CAPABILITIES DIRECTORATE

Time As A Weapon!

A Premise for AFRL's Digital Transformation

Presenter: Mr. David Shahady, DR-IV (GS-15), DAF
Acting Director, Digital Capabilities Directorate

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How Can Digital Transformation Help AFRL Turn Time Into A Weapons Platform?

- Optimize our relationship with knowledge
- Work together
- Right information/right time
- Ask better questions, faster
- Model, analyze, decide, execute
- Reduce barriers to success
- Adapt faster

FASTER RESEARCH

BETTER DECISIONS

STREAMLINE TRANSITIONS

REDUCE TOIL

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Air Force Research Laboratory

Staff Offices

DS – Director of Staff
CCX – Commander's Action Group
SP – Strategic Partnering
DEIA – Diversity, Equity, Inclusion
CLO – Continuous Learning
HO - History

CC – Commander
CA – Executive Director
CV – Vice Commander
CJ – Deputy TEO for Space
CT – Chief Technical Director
CR – Mobilization Assistant to the CC
CCC – Command Chief
CIO – Chief Information Officer

Functional Directorates

DO – Operations
DP – Personnel
EN – Engineering & Technical Mgmt
FM – Financial Management
IP – Information Protection
IZ – Digital Capabilities
JA – Judge Advocate
PA – Public Affairs
SB – Small Business
SE – Safety
XP – Plans & Programs
PK – Contracting

Technical Directorates

RQ – Aerospace Systems	AFOSR – AF Office of Scientific Research	RG – AFWERX	Directed Energy	RI – Information	RX – Materials and Manufacturing
RS – Integrated Capabilities	RW – Munitions	RY – Sensors	RV – Space Vehicles	RD – Directed Energy	STO – Systems Technology

711th Human Performance Wing

RH - Human Effectiveness	USAFSAM – School of Aerospace Medicine

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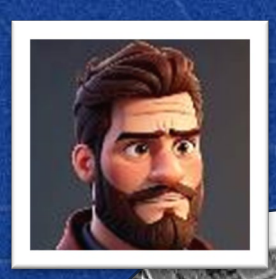
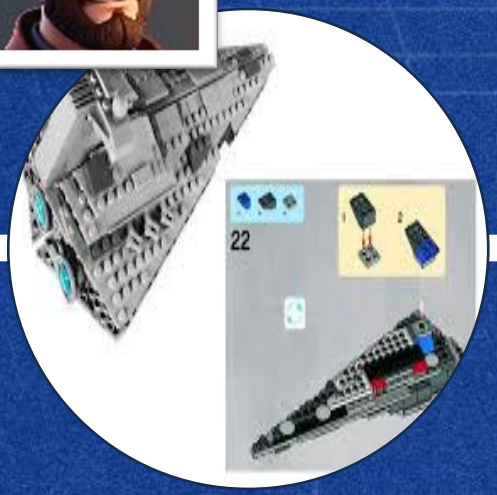
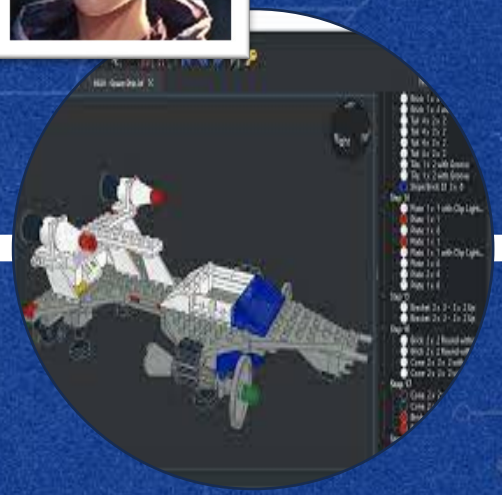
A Digital Example: 4-Gen of Lego Builders

Big Pile of Bricks

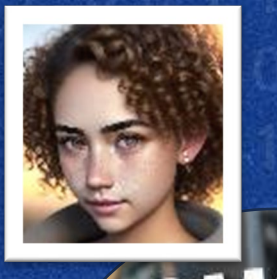




Kit with Directions



Computer Design & Order



Model & 3D Print

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AFRL Digital Capabilities Directorate

AFRL Digital Transformation Strategy

AFRL Digital Transformation Vision

Winning the Fight, Byte by Byte: **Employing Digital to Enable Time as a Weapons System**

AFRL Digital Transformation Mission

Deliver a comprehensive menu of digital services that measurably accelerate the discovery, development, and delivery of high quality and high-impact S&T

AFRL Digital Transformation Goals

FASTER RESEARCH: Accelerated Research, Experimentation, and Innovation

BETTER DECISIONS: Analytically Rigorous Technical, Business, and Operations Decisions

STREAMLINE TRANSITIONS: Seamless Entrance into Acquisition

REDUCE TOIL: Flexible and Responsive Business/Operations

AFRL Digital/IT Roadmap

AFRL Digital/IT ("As Is")

- Data (As Is)
- Products/Services (As is)
- User Groups (As is)
- Architecture (As is)
- Infrastructure (As is)

Digital ALLIES

HANGAR 18

- Compute and Storage
- Cybersecurity
- Data
- DevOps and Compliance
- Generative Artificial Intelligence
- Productivity and Collaboration
- Enterprise Software
- Technical Talent and Consulting
- Training and Education
- Workflow and Helpdesk

AFRL Digital (Categories) Capabilities

AFRL Digital/IT ("To Be")

- Data (To Be)
- Products (To Be)
- Architecture (To Be)
- Infrastructure (To Be)

LABVERSE

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Multitude of Product and Service Needs

Support

Computing

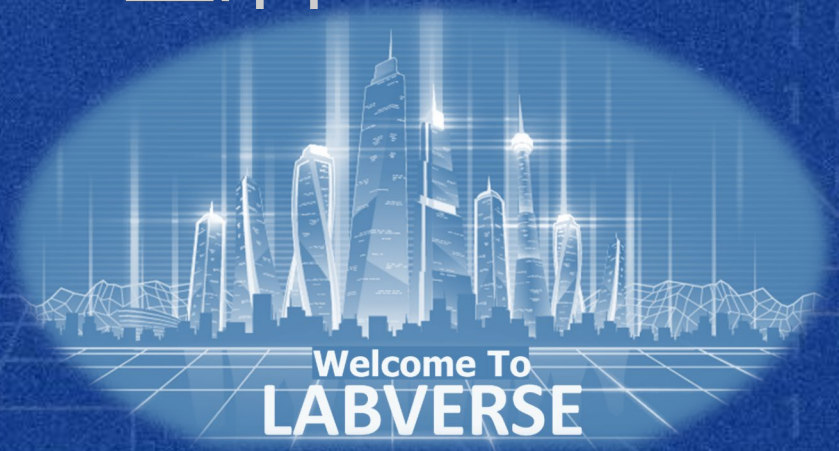
Development

Analysis

Engineering

Digital Services & Products

Implementing Services Catalog



Fielded Enterprise Services

Technical and Functional Directorates

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Delivered Products and Services

“Delivered”

- **Enterprise Business System (EBS)**

  Supports AFRL centralized business processes for S&T activities across AFRL

- **Digital Laboratory Environment (DLE)**

  S&T Digital Engineering tools and Continuous Integration / Continuous Delivery tools hosted at Impact Level 5

- **Secure - Vice Simulations Operations Network (S-VISION)**

  Isolated collateral secret network that includes a set of enterprise research collaboration and information sharing tools used by AFRL and external partners

- **Air Force Research & Development Mission Infrastructure (AFRDMI)**

  Provides dev zone on SIPR & JWICS to use operational data in R&D efforts

- **Defense Shared Research Center (DSRC)**

  Provides High-Performance Computing capability (computing, networking, security, applications) to the Air Force

- **Enterprise Services Management (ServiceNow)**

  Provides a common IT/Digital services and operations platform

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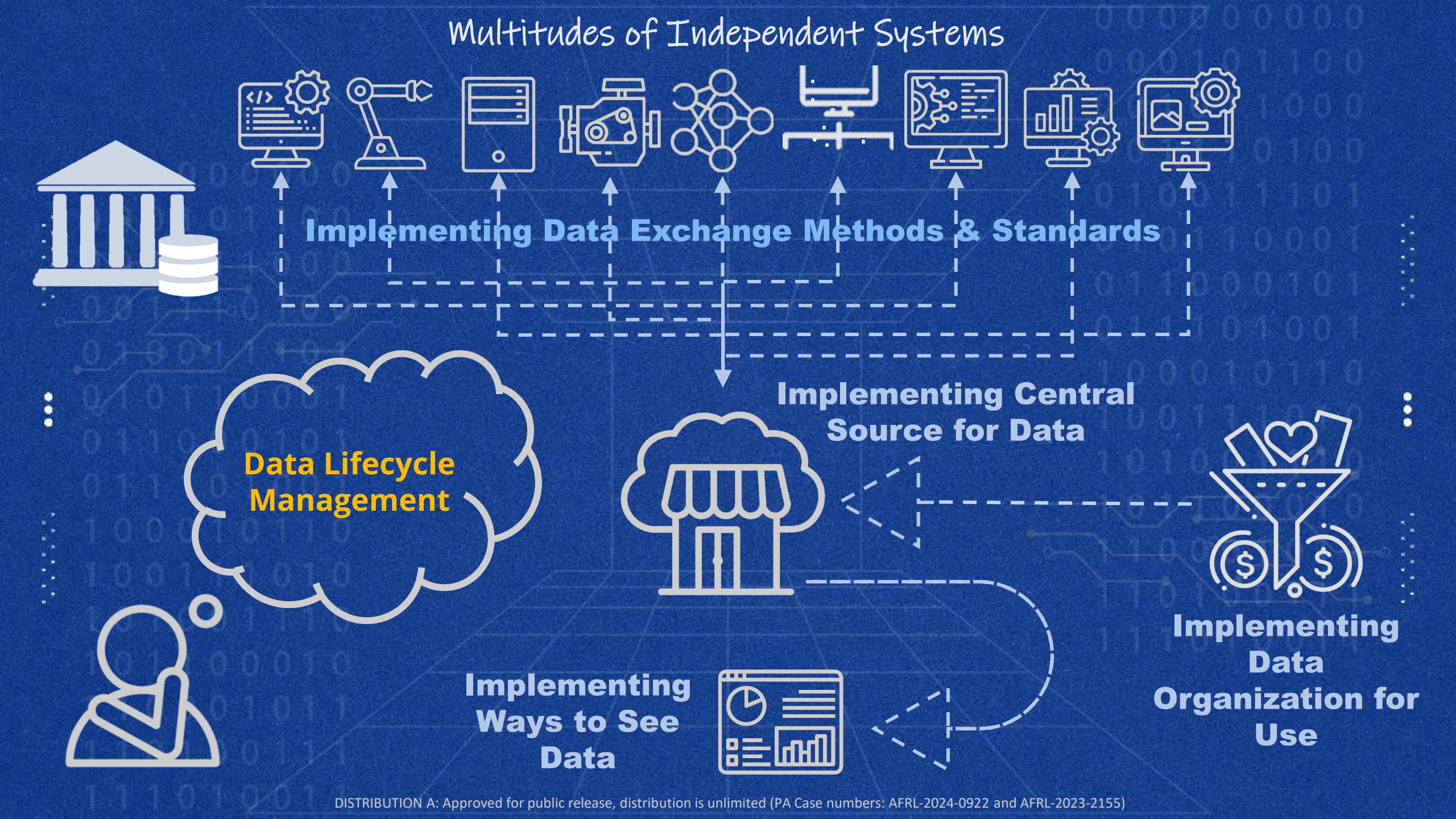

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Increase Organizational Effectiveness

Reducing Toil

Connect with Modern Approaches

Generative Artificial Intelligence

Simplify Paths for AI-Enabled Tools

Rapid Enablement

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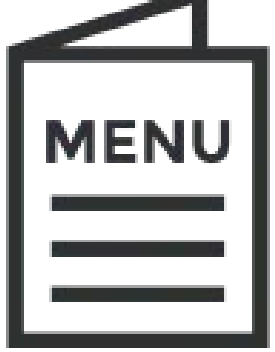
Innovative Pathfinders and Pilots

HANGAR 18



"Up and Coming Capabilities"

- **AFRL Google Workspace**
  - Productivity suite for academia, industry, & foreign collaborators

- **CloudLab / Build Your Own Digital Lab**
  - On-demand access to Cloud resources for R&D

- **Data Enabled Laboratory VAULT Environment (DELVE)**
  - Delivers a "marketplace" for AFRL data

- **NIPRGPT**
  - Generative AI Platform for R&D

- **ACQBOT**
  - Generative AI Platform focused on the R&D (Acquisition)

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Expand Digital Upskilling

Experiment with new ways of working

Processes

Digital Transformation of AFRL Operations

Enhance the Digital Culture

Technical and Functional Directorates

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Operations

“Talent”

- **AFRL “Digital Allies” Model**

  Quickly providing the right talent and expertise at the right time

- **Digital Talent Management**

  Provides AFRL workforce with focused training and learning resources

- **Digital Test Bed**

  Provides collaborative environment for trying out and learning about digital tools

- **AFRL Digital Dialogues**

  Provides AFRL workforce with weekly forum on myriad of topics

- **DCD DigITal Acquisition Hub**

  Streamlining the acquisition of Digital /IT Talent, Products, and Services

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