

UNITED STATES
PATENT AND TRADEMARK OFFICE



Modernizing USPTO IT Systems and Emerging Technologies in IP Ecosystems

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UNITED STATES
PATENT AND TRADEMARK OFFICE ®

Impact of Emerging Technologies in IP Ecosystems

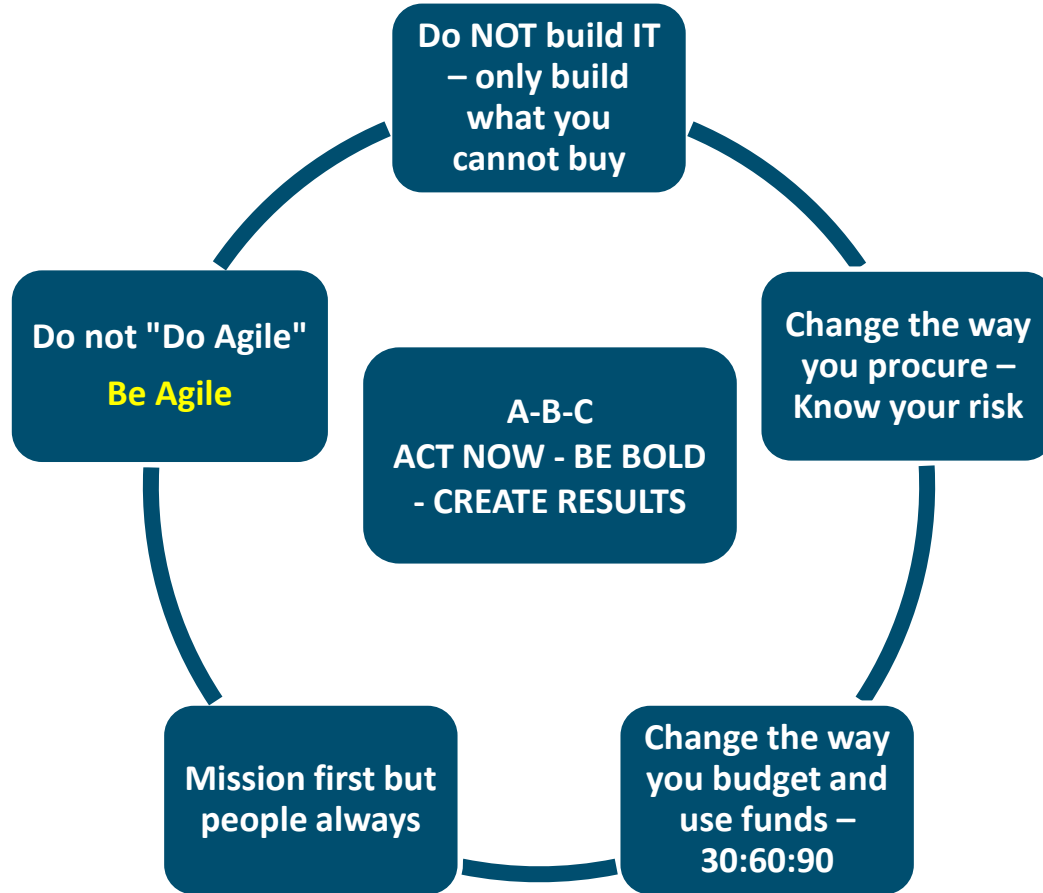
Foundations of IT Modernization

Modernizing IT systems

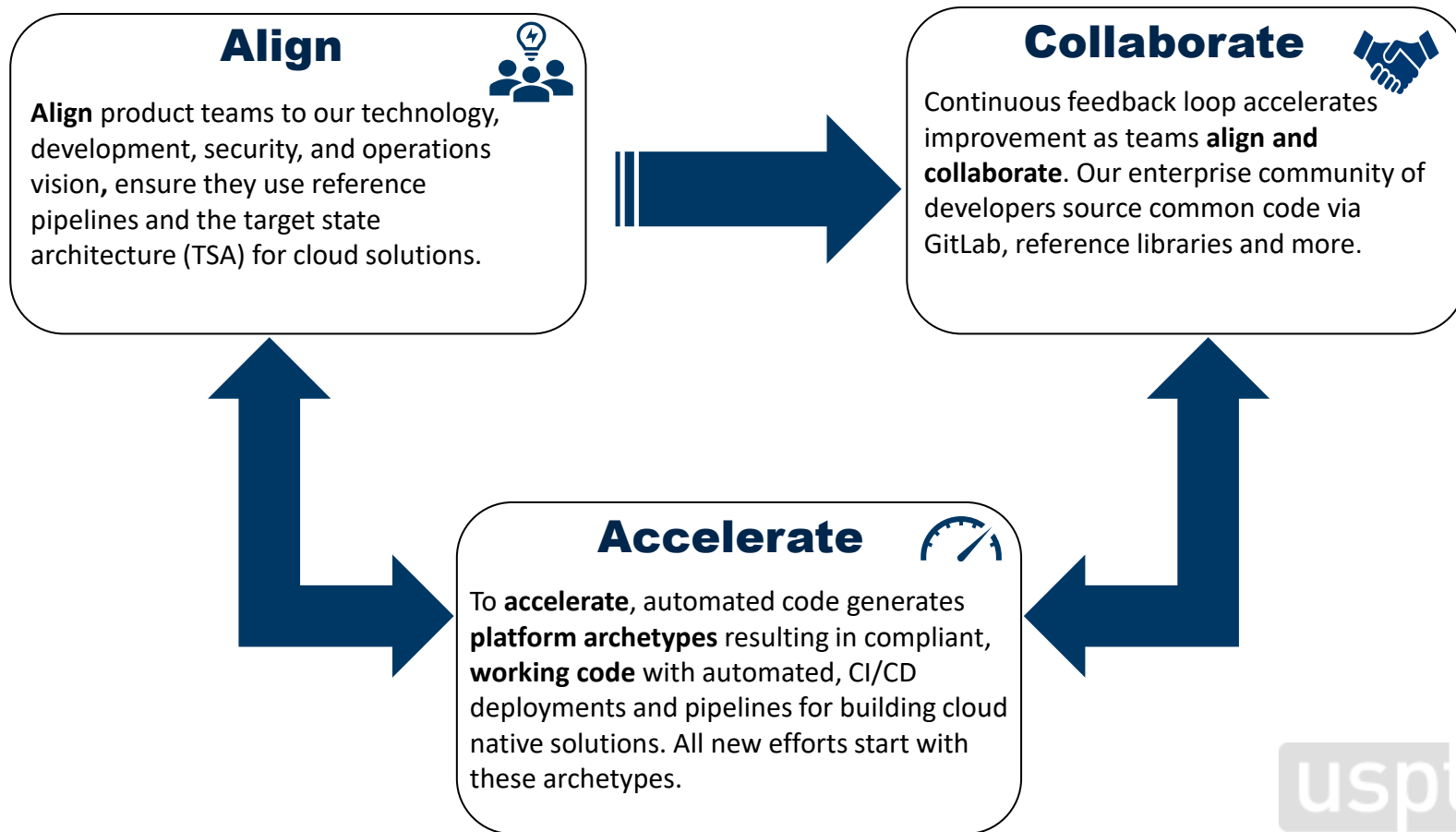
- Foundational practices for results
 - **Services ecosystem** — service centricity as we decouple monolithic applications for new agility
 - **Platform-as-a-service** — efficiency from common standards & practices
 - **Optimized operations** — for faster delivery
 - **Next generation security** — DevSecOps and monitoring
 - **Cloud-native** infrastructure — reduced costs and more agility
 - **Data as an asset** — AI automates data-driven decisions
 - **AI-augmented processes** — new efficiency for applicants and teams



ABC's of IT guiding principles



Putting into practice: Platforms and community



Putting into practice: Cloud migration

WHY CLOUD?

Accelerating innovation at USPTO
with modern enterprise services.

CURRENT STATE

- Overprovisioned, inflexible capacity
- Inability to self-provision resources
- Consulting and acquisition costs for additional services



Enable Staff



Engage Staff



Ensure Progress



SUPERVISOR RESPONSIBILITIES



Utilize



Monitor



Adopt



Execute



STAFF RESPONSIBILITIES



Enhanced
Performance
& Availability



Scalability
& Elasticity



Increased
Operational
Efficiency



More for
Less



Improved
Business
Continuity



Faster
Time to
Production



ENTERPRISE WIDE BENEFITS

Impact of Emerging Technologies in IP Ecosystems

Leveraging Artificial Intelligence

AI grows more capable each year

2022-2023 Generative AI

- First large-scale commercialization of Generative AI

2024 Reasoning

- Rise of “reasoning” to scale model capabilities

2025 Current State

- U.S. AI labs release “Gen3” models trained with 10^{26} math ops



AI in transformation and IT modernization

United States AI agenda:

- *"[T]o promote human flourishing, economic competitiveness, and national security"*

Our task as IP offices:

- Deliver mission-aligned value to our stakeholders through **smart** and **efficient** use of frontier AI technologies while maintaining public trust in our offices and the IP ecosystem.



AI playbook: the right hammer for the nail

AI for Business

Deliver AI solutions supporting granting patents and registering trademarks

- Search & classification
- Process automation
- Quality assurance
- Expert augmentation

AI for Technologists

Leverage AI for modern, secure, resilient, and efficient agency IT systems

- Legacy code analysis
- Code generation
- Language translation
- Telemetry analysis

AI for Everyone

Broadly empower agency personnel and public users with flexible and adaptable AI tools.

- General-purpose Generative AI
- Virtual assistants
- Productivity tools

Foundational building blocks for AI

- **Sandboxes** facilitate discovery, prototyping, and new capabilities
- **Modern cloud infrastructure** can serve AI at scale
- **Subject-matter expertise** both in the AI technology and problem domains
- **Education and policies** empowers our workforce to use AI effectively and accountably
- **Singular focus on mission:** always put business value over technical novelty



