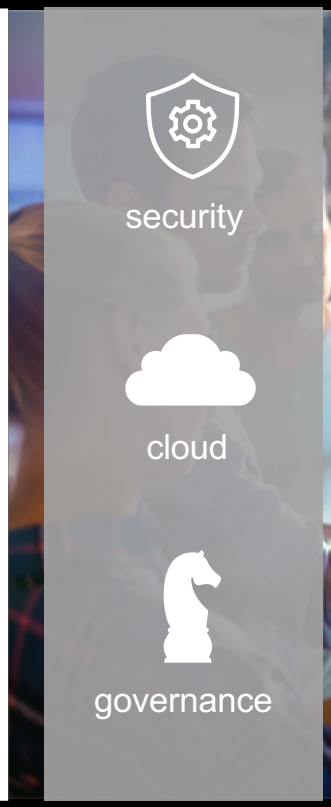
Modernization Playbook

Modernization Playbook

1. Create a **plan** (with change management and MGT payback) and **evangelize** the vision
2. Implement an **agile**-based work management and communication strategy
   - ---
3. Establish **capacity**
4. **Train** team
   - ---
5. Assess application **environment**
   - ---
6. Incorporate **modern architecture** stack and tooling
7. Consider **low code / no code** options
8. Investigate **cloud** options
   - ---
9. Incorporate **security**
   - ---
10. Ensure a **data-centric** approach (start with outcomes in mind and focus on data quality)
    - ---
11. Consider **user experience** including mobility options
    - ---
12. Construct automated **pipeline**
13. Incorporate comprehensive (largely automated) **testing**
14. Establish a light-weight **governance** model (addressing security, data and process)
    - ---
15. **Deploy** business value quickly but incrementally
    - ---
16. **Operationalize** it



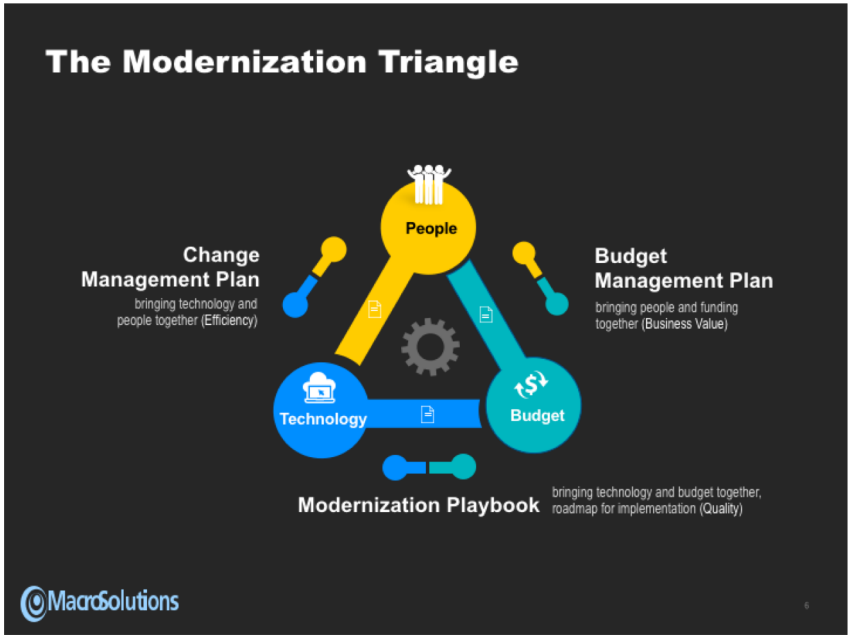
MacroSolutions

Play 1 – Plan, Evangelize, Incorporate Agile

Create a plan that includes a technical approach, change management and budget management. Evangelize the vision of the plan by seeking executive top-cover and engaging the naysayers (they can sometimes provide meaningful input that get us learning). Plan to implement agile and DevOps from the start.

Actions

- Implement Agile tools and techniques
- Use Modernization Triangle to build plans and business case
- Get executive top cover
- Be familiar with the MGTA
- Focus on efficiency and ROI
- Capture baseline for costs and performance

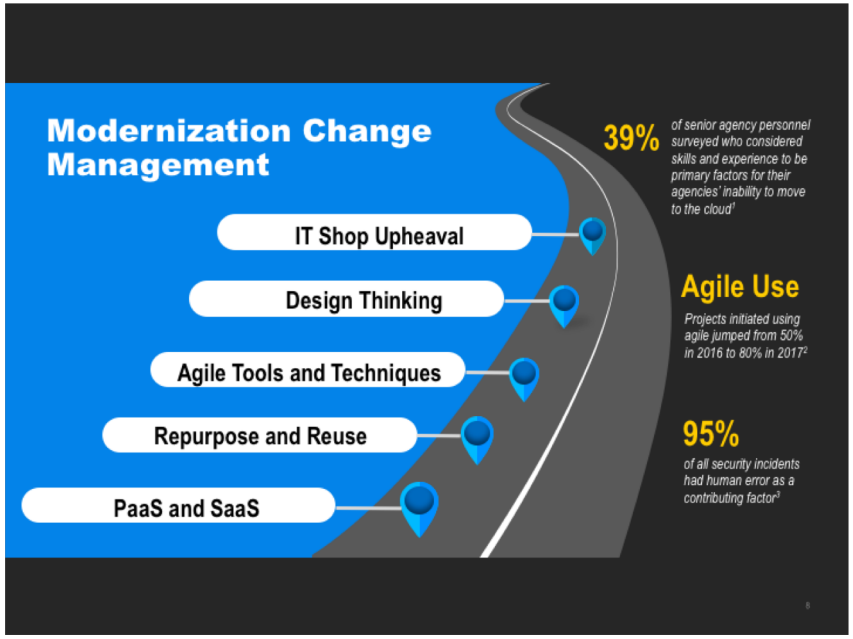


Play 2 – Establish Team

This is all about team readiness. Begin by establishing the level of effort available (and needed) to start the work. Get the team the training they need to hit the ground running with agile and the new technologies that the team will encounter.

Actions

- Assemble team and acclimate team to new realities
- Embrace Design Thinking
- Train on Agile and DevOps
- Find true Product Owners
- Train on new technologies
- Engage the naysayers

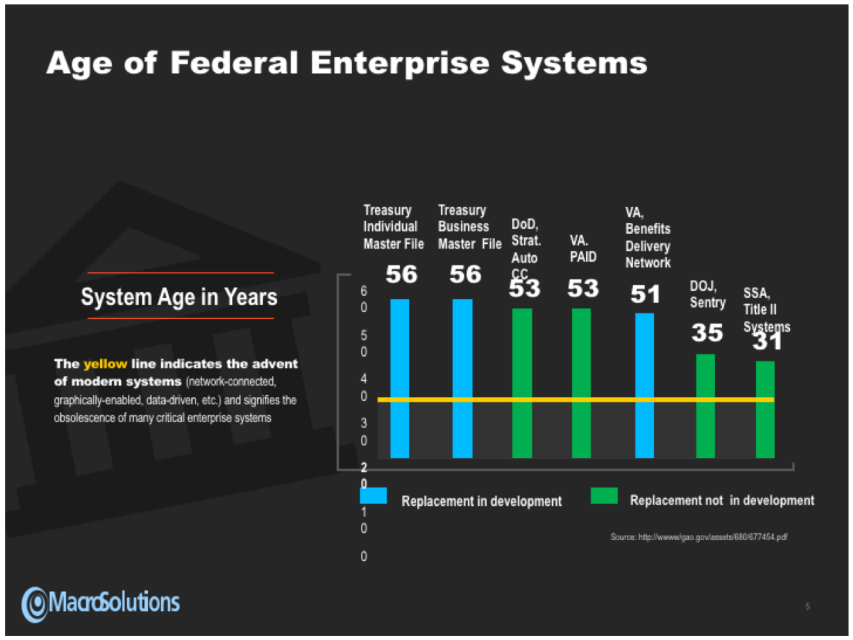


Play 3 – Assess Environment

Take a close look at all the applications in the portfolio capturing profiling dimensions like mission-criticality, technical architecture, alignment with user needs and alignment with organization strategic plans. Sort the portfolio into three categories: keep as is, dump, or transition to a modern environment, with the goal to achieve improvements in overall organizational operations and alignment with strategic plans.

Actions

- Understand planned outcomes
- Evaluate applications - create group for modern transition
- Emphasize DME over O&M
- Plan for automated pipeline with DevOps



Play 4 – Incorporate Modern Technology

Take full advantage of modern architecture stacks and tooling, and go beyond Platform-as-a-Service (Paas) and consider Software-as-a-Service (SaaS), a “Low Code/No Code” option like Salesforce or ServiceNow.

Actions

- Incorporate a “Cloud First” strategy
- Standup a cloud-based sandbox to get team acclimated

Partners

- Amazon Web Services
- Microsoft
- Pivotal
- Salesforce
- ServiceNow

Play 5 – Bake in Security

Federal agencies must comply with the Federal Information Security Modernization Act (FISMA) and implement the security controls within their portfolio of applications. This requirement holds as applications are modernized and/or migrated to the cloud. Embed security within the day-to-day operations of the team to ensure necessary controls are addressed in development, testing and deployment.

Actions

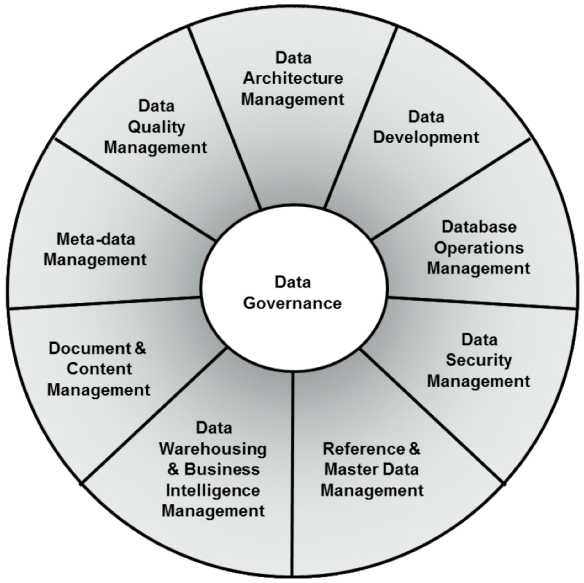
- Embed security function (and personnel) in modernization team
- Incorporate security into DevOps with DevSecOps

Play 6 – Consider Data

Start with outcomes in mind and keep focus on data quality – garbage in, garbage out. Incorporate the facets of good data governance provided by the Data Management Book of Knowledge (DMBoK).

Actions

- Understand and communicate anticipated outcomes
- Evaluate quality of data
- Craft plan for migration (and cleansing) of data
- Plan to ensure data validity post transition

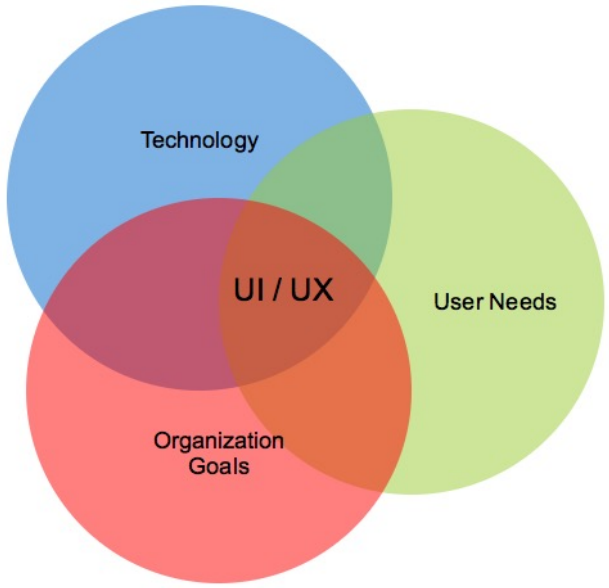


Play 7 – Focus on the User

User experience (UX) is a conglomeration of tasks focused on optimization of a product for effective and enjoyable use and designing a user interface (UI) is its compliment, the look and feel, the presentation and interactivity of a product. Both UI and UX need to be incorporated as a guiding principle for teams and to assess product acceptability.

Design Thinking Checklist

- Learn from people
- Find patterns
- Define design principles
- Make tangible
- Iterate relentlessly

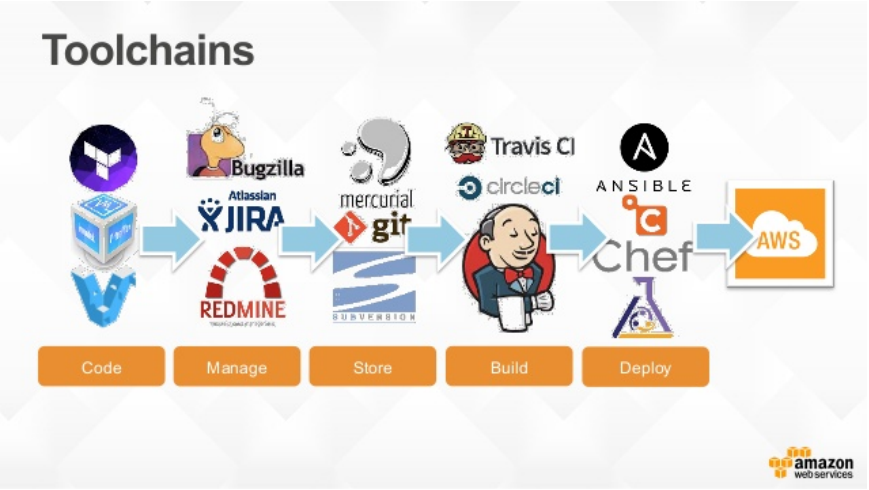


Play 8 – Automate a Rich Pipeline

Incorporate DevOps with an automated application pipeline, incorporate comprehensive (automated) testing, and establish a light-weight governance model that addresses security, data and process.

Actions

- Standup DevOps incorporating testing, security and governance
- Prepare blue/green deployment approach



Play 9 – Deploy Quickly (and Often)

In keeping with the tenets of Agile, deploy business value quickly but incrementally.

Action

- Work the DevOps process
- Review the checklist
- Stay connected to user community

Play 10 - Operationalize

Organizations have spent much more on Operations and Maintenance (O&M) than on Development, Modernization and Enhancement (DME). Operationalizing a modernized application portfolio begins with flipping this paradigm with an assumption that DME will be the method by which the applications will be maintained going forward.

Action

- Keep development team engaged in ongoing deployments
- Flip the O&M to DME ratio to focus on DME
- Track actuals against baselines for costs and performance