

BLOCKCHAIN PLAYBOOK: DO I NEED A BLOCKCHAIN?

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1. Financial
management

1. Procurement

1. IT asset and
supply chain
management

1. Asset
Management

1. Patents,
Trademarks
Copyrights, Royalties

1. Government-
issued credentials
like visas, passports,
SSN and birth
certificates

1. Federal personnel
workforce data

1. Appropriated funds

1. Federal assistance
and foreign aid
delivery



Will the use case involve a business network, which spans multiple organizations/agencies?

Is there a current lack of trust among the business network participants and/or sources of data?

Is this a use case that can be more efficiently solved with other technologies (e.g. distributed database)?

For this use case, is there an existing system that could serve as a trusted source of the truth for all parties?



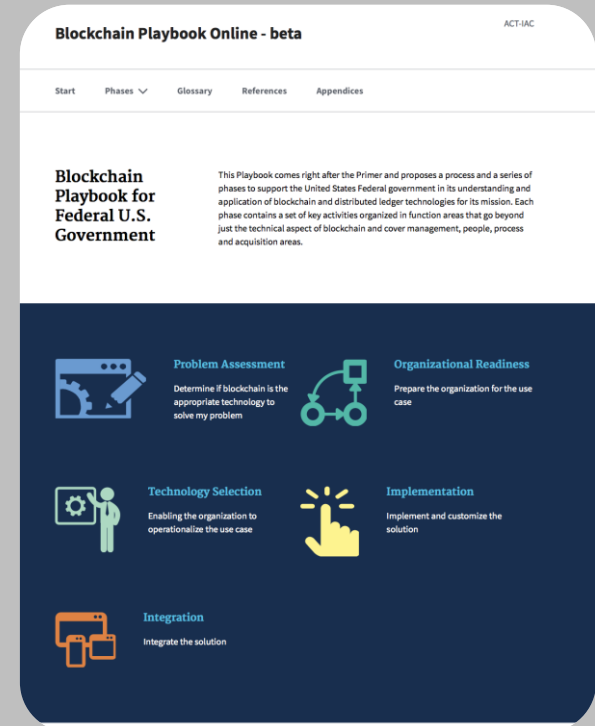
ACT-IAC Blockchain Working Group Playbook

Proposes a methodology to assess use cases and prepare organizations for blockchain-based systems

Explores key activities in 5 functional areas through 5 phases

First 3 phases described in the current version

501(c)3 non-profit educational organization established to improve government through the effective and innovative application of technology.



1



ASSESSMENT

Determine if blockchain is the appropriate technology to solve my problem

2



READINESS

Prepare the organization for the use case

3



SELECTION

Enabling the organization to operationalize the use case

4



IMPLEMENTATION

Implement the solution

5



INTEGRATION

Integrate the solution



KEY ACTIVITIES



ASSESSMENT



READINESS



SELECTION

Management	People	Process	Technology	Acquisition
<ul style="list-style-type: none"> Choose the use case for review to achieve mission goals 	<ul style="list-style-type: none"> Identify potential stakeholders and collaborators 	<ul style="list-style-type: none"> Know the use case and the value proposition 	<ul style="list-style-type: none"> Understand the attributes Prepare for ATO 	<ul style="list-style-type: none"> Determine the options
<ul style="list-style-type: none"> Define initial schedule, budget and governance 	<ul style="list-style-type: none"> Identify the key end users and DLT network participants 	<ul style="list-style-type: none"> Define scope Validate impact and develop target <u>ConOps</u> 	<ul style="list-style-type: none"> Assess readiness for risks related to nascent DLT technology, security and decentralization 	<ul style="list-style-type: none"> Establish Consensus on DLT Governance Model Baseline target KPIs
<ul style="list-style-type: none"> Reinforce schedule, governance and budget 	<ul style="list-style-type: none"> Confirm DLT Participants Identify skill gaps 	<ul style="list-style-type: none"> Validate scope Test <u>ConOps</u> for target state Develop Change Management Plan 	<ul style="list-style-type: none"> Choose technology platform Define business architecture Define Operating model 	<ul style="list-style-type: none"> Define Performance Metrics Develop Acquisition model and milestones





Goal: Determine if blockchain is the appropriate technology to solve my problem

Inputs

ASSESSMENT

Outputs

Blockchain

Primer.
Basic understanding of
Blockchain

Business

- Problem Statement
- Use Case Ideas

GRC

- Awareness of :
- Applicable NIST Guidance – FISMA, 800-53 (Security), 800-63(Identity)
 - Agency specific compliance
 - Government-wide & agency-specific policies

Key Activities



Management

- Choose the use case for review to achieve mission goals

People

- Identify potential stakeholders and collaborators

Process

- Know the use case and the value proposition

Technology

- Understand the attributes
- Prepare for ATO

Acquisition

- Determine the options

Key Outcomes

Engaged

- Program/mission office executive and rank and file

Defined

- A blockchain solution is applicable. (Selection is not defined in this phase)

Planned

- The ROI permits MGT, procurement options exist.

Blockchain

- Technical Vision
- Non Functional Requirements

Business

- Valid Use Cases
- Future State Vision
- Stakeholder Analysis

GRC

Guidance on:

- Applicable government-wide and agency specific policy and compliance requirements.



Start Small

Look at business & blockchain capabilities

Build architectural blueprint for future phases

Look at the ROI and benefits to the entire network





Goal: Prepare the organization for the use case

READINESS

Inputs

Outputs

Blockchain

- Technical Vision
- Non Functional Requirements

Business

- Valid Use Cases
- Future State Vision
- Stakeholder Analysis

GRC

Guidance on:

- Applicable government-wide and agency specific policy and compliance requirements.

Key Activities



Management

- Define initial schedule, budget and governance

People

- Identify the key end users and DLT network participants

Process

- Define scope
- Validate impact and develop target ConOps

Technology

- Assess readiness for risks related to nascent DLT technology, security and decentralization

Acquisition

- Establish Consensus on DLT Governance Model
- Baseline target KPIs

Key Outcomes

Engaged

- Blockchain SMEs, PM, EA
- Network Participants
- Cross-Functional Team

Defined

- Governance Model
- Key Performance Indicators
- Business Capabilities

Planned

- Change Management
- Mitigation for top blockchain risks

Blockchain

- Enterprise Arch. Guidelines
- KPI Baselines

Business

- Target State Concept of Operation
- Scope
- Procurement Plan
- Validated AS-IS Process Maps

GRC

- Initial Cost & Schedule Estimates
- Change Management Plan
- Governance Model
- Risk Management Plan



Standing up a blockchain governance office

Defining the scope of blockchain services and governance processes

Assessing risks and establishing risk mitigation strategies

Assessing existing systems' integration readiness

Assessing selected key performance indicators





Goal: Enabling the organization to operationalize the use case

Inputs

SELECTION

Outputs

Blockchain

- Enterprise Architecture Guidelines
- KPI Baselines

Business

- Target State Concept of Operation
- Scope
- Procurement Plan
- Validated AS-IS Process Maps

GRC

- Initial Cost & Schedule Estimates
- Change Management Plan
- Governance Model
- Risk Management Plan

Key Activities



Management

- Reinforce schedule, governance and budget

People

- Confirm DLT Participants
- Identify skill gaps

Process

- Validate scope
- Test ConOps for target state
- Develop Change Management Plan

Technology

- Choose technology platform
- Define business architecture
- Define Operating model

Acquisition

- Define Performance Metrics
- Develop Acquisition model and milestones

Key Outcomes

Engaged

- Blockchain SME, Product & Business Owner
- Contracts SME
- Cross Functional Team

Defined

- Platform Architecture
- Acquisition Model & milestones
- Business Architecture

Planned

- Contract Negotiation
- Solution Design
- Operational Model Implementation

Blockchain

- Conceptual Platform Architecture
- Operational Model
- DLT Network Basics

Business

- Business Architecture
- Resource Plan
- Acquisition Milestones
- Success Criteria

GRC

- Revised Cost & schedule estimate
- Acquisition Plan
- Operational Model



Business considerations

Governance

Mode of operation

Transaction cost

Technical considerations

Permissioned vs permissionless

Digital asset and DLT requirements

Deployment models

How to buy

Leverage commercial contracting methods

Buy small, build small, test, and iterate

Do not lock technical requirements into the contract



1.blockchain
security

1.economic
study

1.workforce
development

1.technology
integration

1.FIBF

1.Acquisition
and DLTs



September



projects outputs
finalized



October



projects outputs
integration in
playbook



November



block-a-thon
event



December



phases 4 & 5
finalized



January



blockchain
forum #3
event



Thank You

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ACT IAC BLOCKCHAIN PROJECT: <https://www.actiac.org/blockchain-and-distributed-ledger-technology-project>

PLAYBOOK (ONLINE): <https://blockchain-working-group.github.io/blockchain-playbook/>

PLAYBOOK (PRINT): https://www.actiac.org/system/files/blockchain%20playbook%20final_1.pdf

ACT-IAC

The American Council for Technology-Industry Advisory Council (ACT-IAC) is a 501(c)3 non-profit educational organization established to improve government through the effective and innovative application of technology.

ACT-IAC provides an objective, trusted and ethical forum where government and industry executives can communicate, collaborate and learn.



Playbook Development Journey

120 working group members

88 playbook participants

46 government / academia

21 playbook active contributors

40 meetings

