

Air Combat Command

F15 107 Process RIE - Out-brief

10-12 July 2007, Robins AFB, GA



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12 July 2007*

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Integrity - Service - Excellence



Objective

Synthesize existing work to date of ACC, AFMC, 402 MXW, 330 ASW, and other efforts to minimize the F-15 107 processing time from the initiation of a request to maintenance complete, and institutionalize the new process across the CAF.

Deliverables

- **F-15 Future State Maps**
- **Establish Performance Standards**
- **Establish Measurements to Track Performance**
- **Institutionalize the Change**



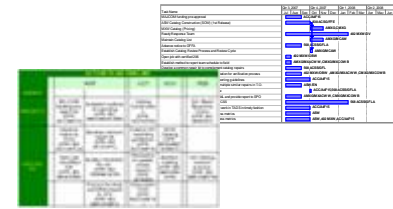


F-15 107 RIE Process

Guidance and Charter



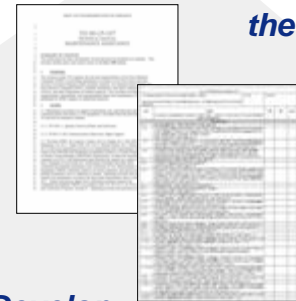
CPI and the Way Ahead



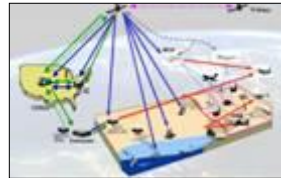
AFSO21 Training and Facilitation



Institutionalize the Process



Warfighter Focus



Review Previous Work



Build the Future State Map

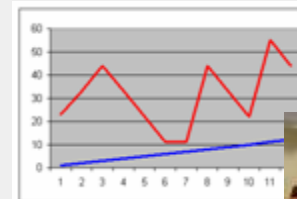


Establish Standards of Performance

Future State

Area	Current	Target
COA	20	25
COE	15	20
COI	10	15
COJ	5	10
COK	0	5

Develop Measurements and Track Performance





The Team!



Team Champions:

Col Frederick Jones ACC/A4F

Col Niemantsverdriet 830 ACSG

Team Leaders:

Sara Keller ACC/A4F-2

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Facilitators:

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Team Members:

George Levy 568 ACSS

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Theresa Laster WR ALC

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Capt Patrick Lowe 33 MOS

Renee Rowe 586 CBSS

Randal Dannenfelser HQ AFMC

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Dennis Bateman 402 AMXG

Robert Rice NGB/A4MC

Maj Tom Rogers 830 ACSG

Tim Peters 568 ACSG

Jimmie Derr 402 MXW



SIPOC

Suppliers

- MAJCOMs
- DLA
- CSW
- MX Wing
- Field Units
- ASW/SPO
- Boeng (Contract Support)
- AFETS

Inputs

- Funding
- Certification
- Parts/Material
- Transportation
- Tooling
- Manpower
- Benchstock
- Cost Estimate
- 107 Requests
- Facilities
- Support Equipment

Processes

*SEE
CURRENT
STATE
MAP FOR
DETAILED
PROCESS
STEPS*

Outputs

- Completed in reasonable time (3-5 days)
- Repair right 1st time
- Uninterrupted work
- Right priorities & feedback to units
- Funding status feedback
- Cost of repair up front
- Part availability
- Process must work without dollars
- Description of repair needs in tech data
- Cost estimate from maintenance
- Full funding authority (no MAJCOM approval)
- Faster / legible 185's (1-2 days)

Customers

- Maintenance Wing (Field Unit)
- MAJCOM's
- ASW
- CSW (GLSC)
- MXW





Process



Mission Statement:

Reduce the un-scheduled depot maintenance request administrative processing flow time for the purpose of increasing aircraft availability to the field.

Value Statement:

Excessive administrative processing time drives up the number of hours and days aircraft remain in depot-status thus detracting from aircraft availability.

Boundaries:

Start: request from field

- to -

Stop: maintenance complete and aircraft turned back over to the unit

Metrics:

Aircraft Availability, Time to Deploy DFT or CFT, Repair Time



Current State Map



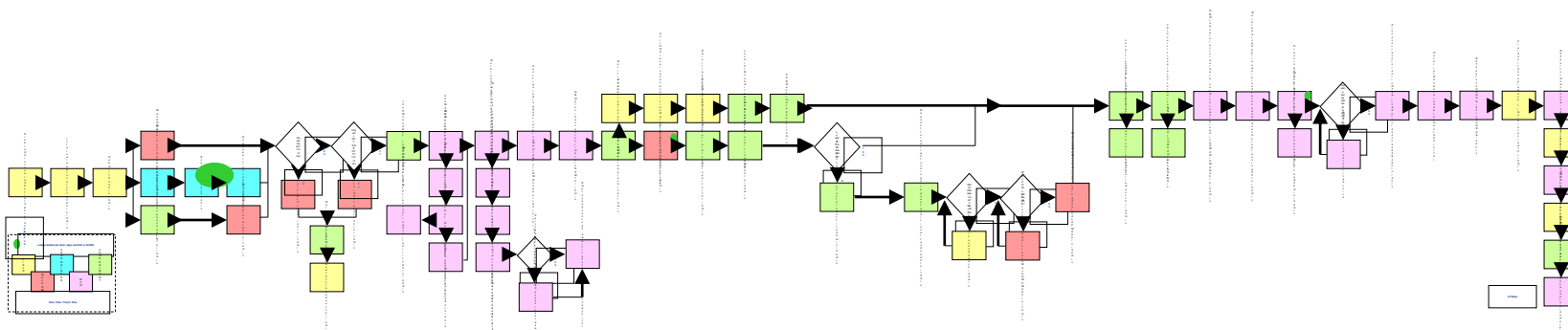
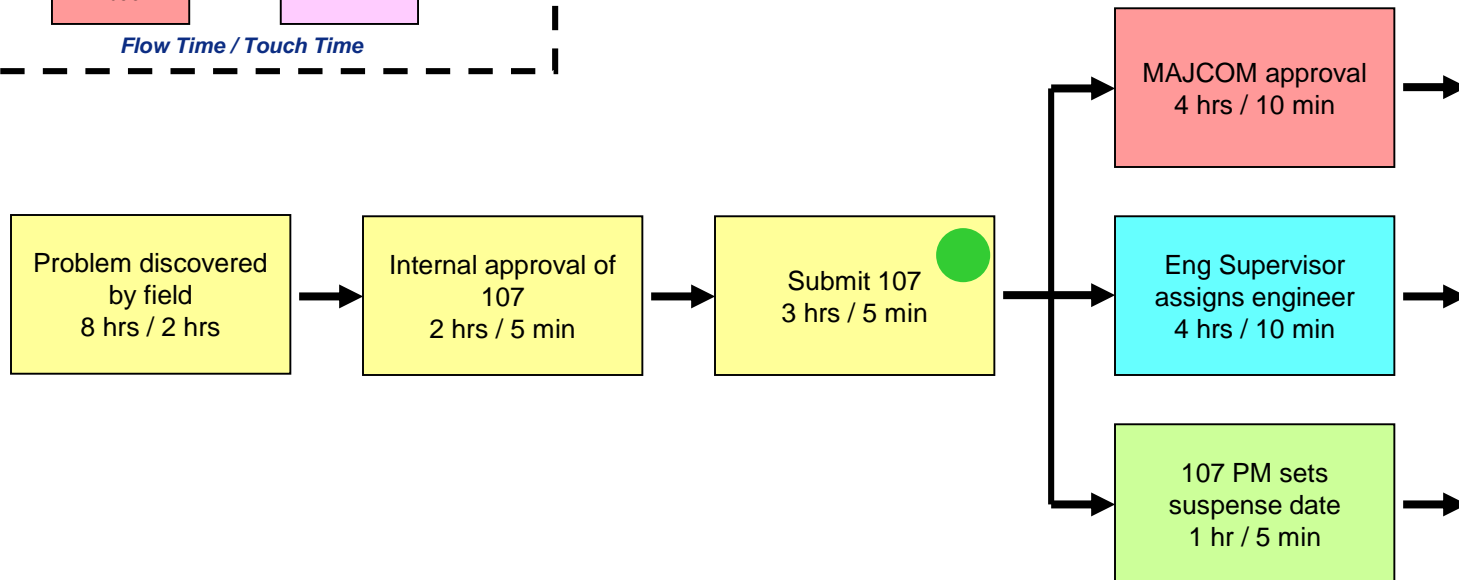
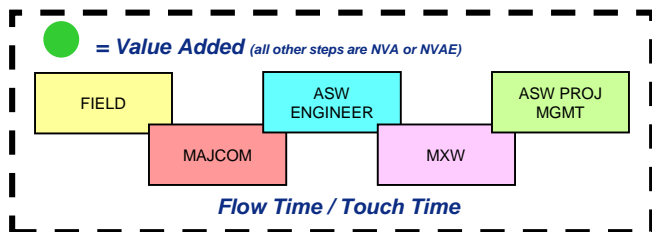
Gap Analysis

- **Late notice of funding drives long delays**
- **Lack of pre-approved personnel drives delays in getting travel cards, passports, etc...**
- **Multiple MAJCOM approval steps create multiple delays**
- **Resources not deployed until all funding, parts, equipment, people, etc...are secured – customer has no visibility of this and is left in the dark, frustrated at the long delays**
- **Serial process creates extended administrative processing time**



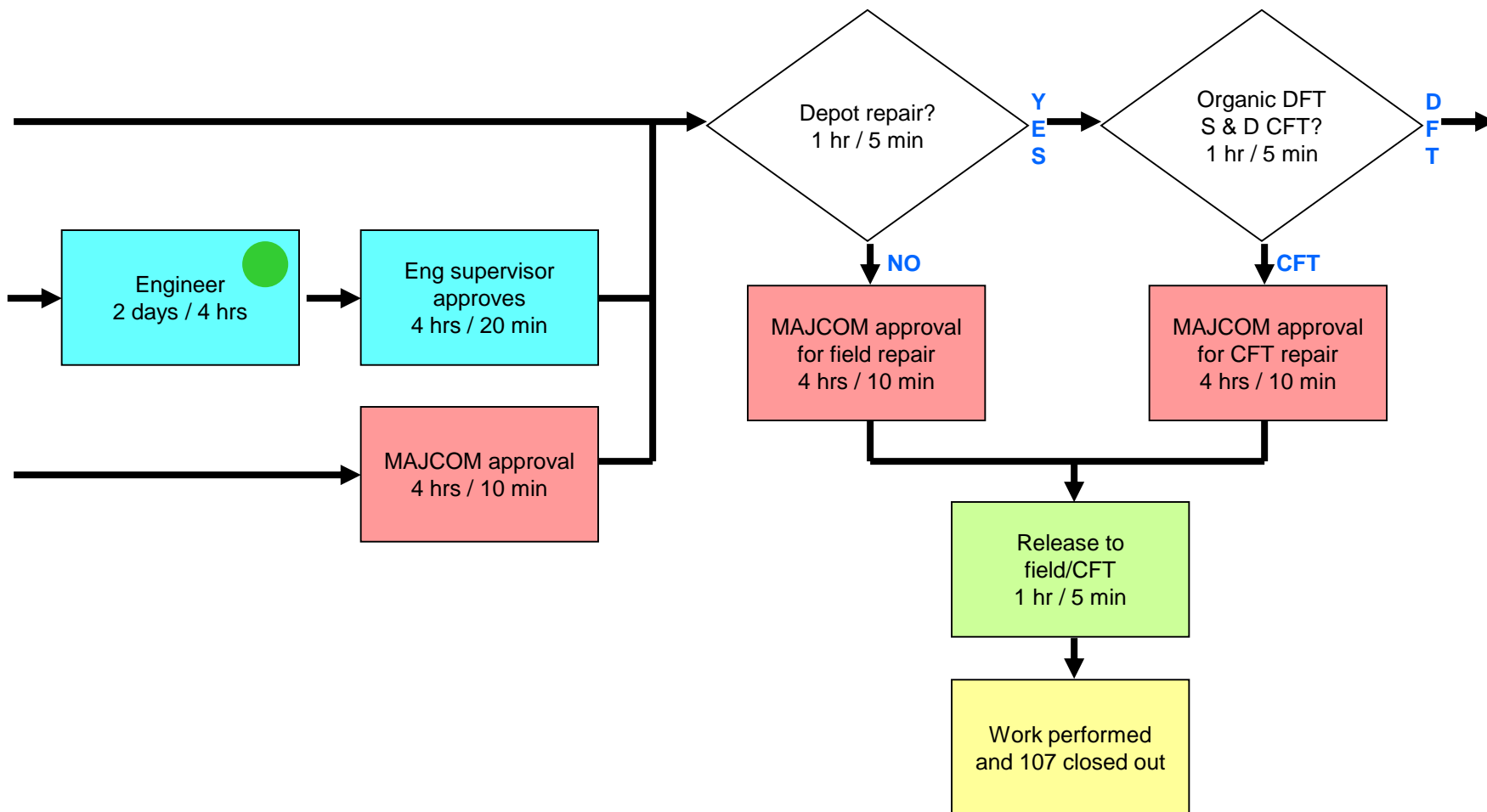
Current State

Legend:



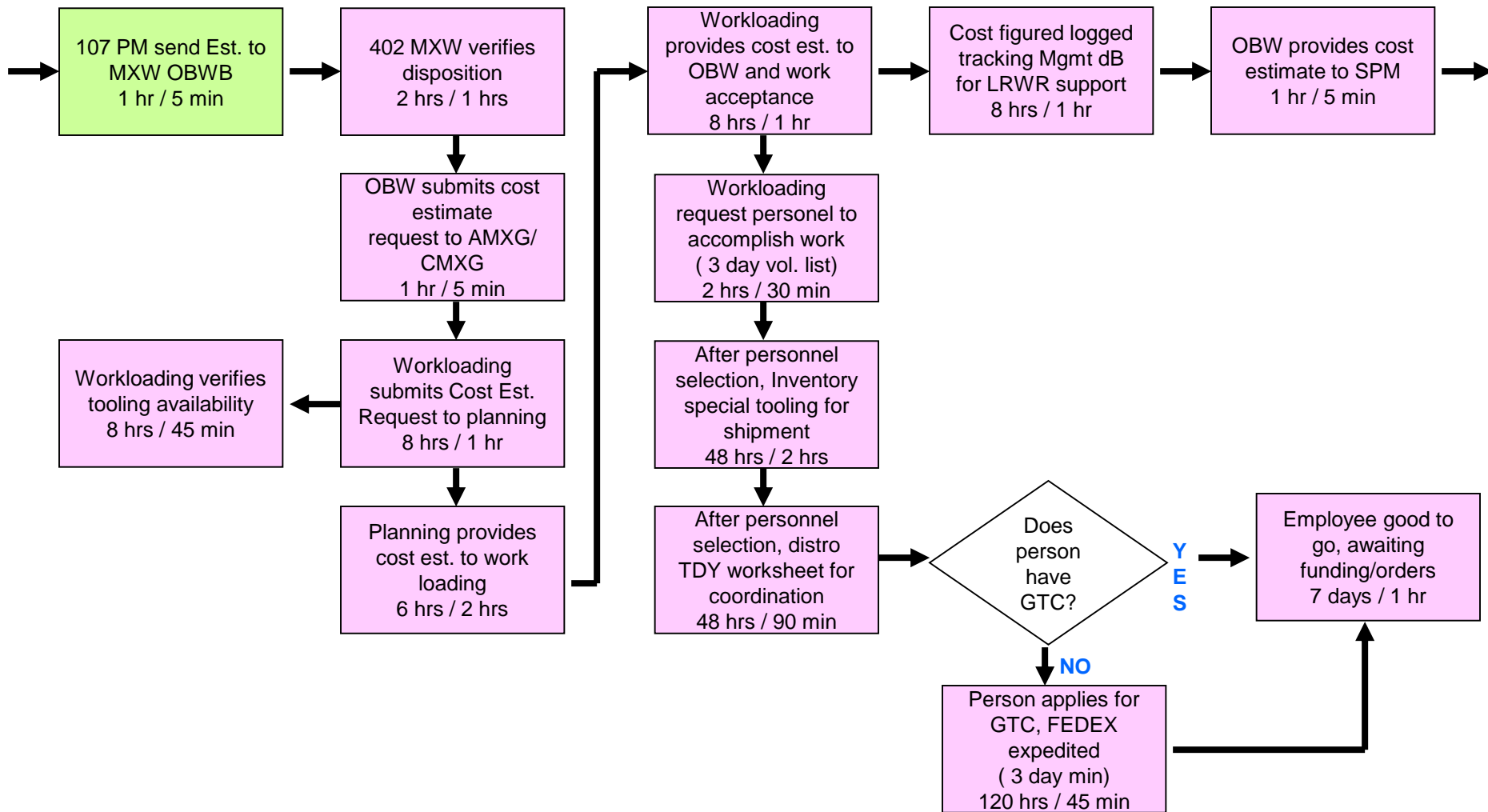


Current State



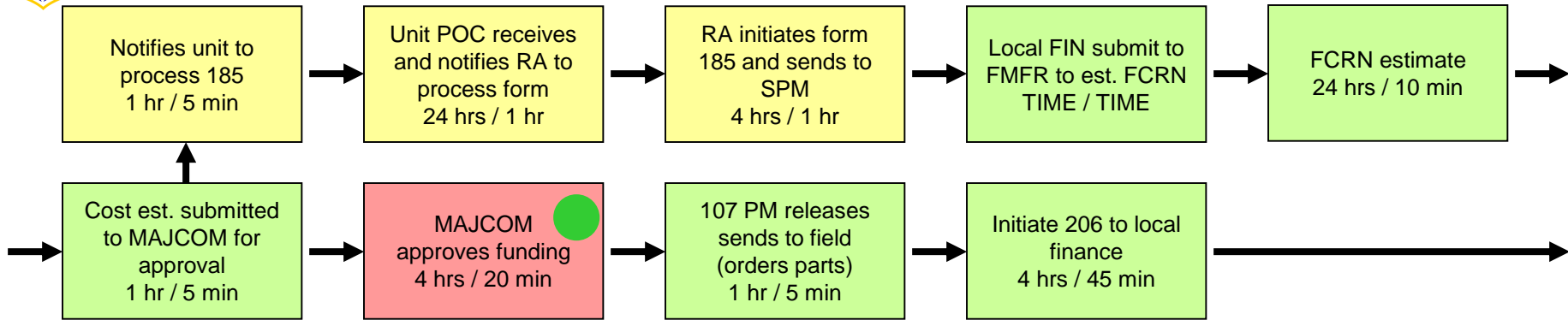


Current State



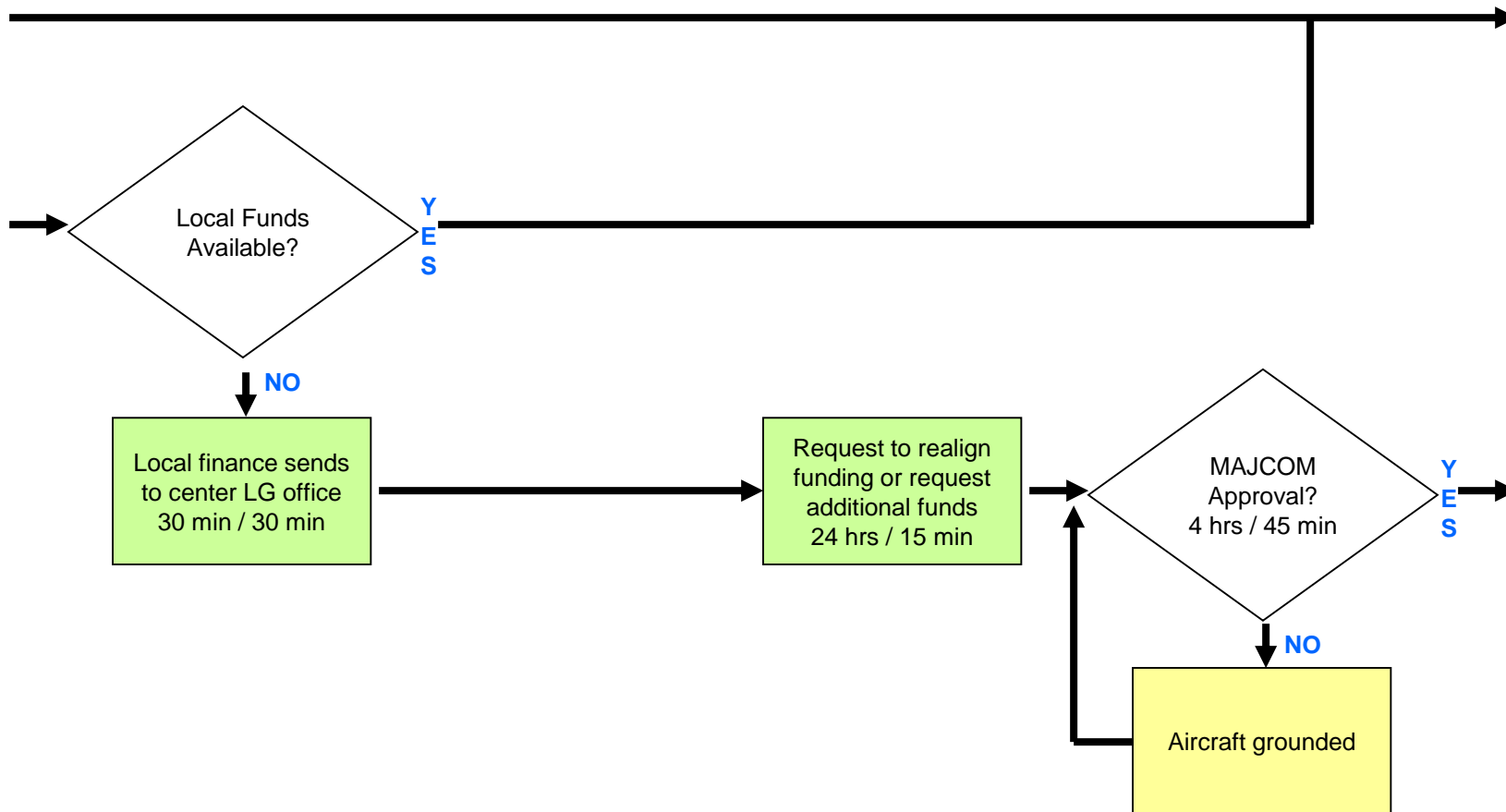


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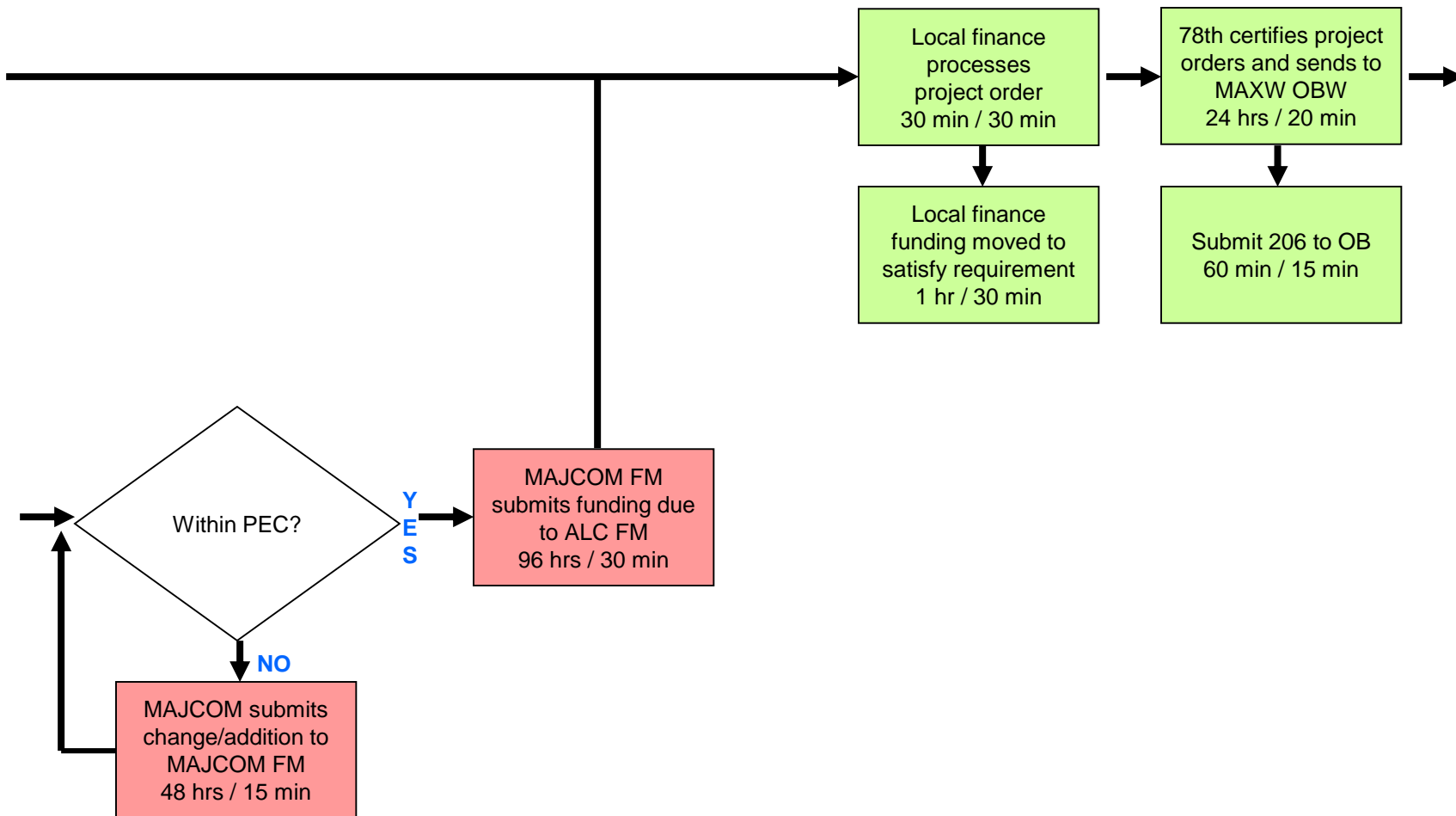


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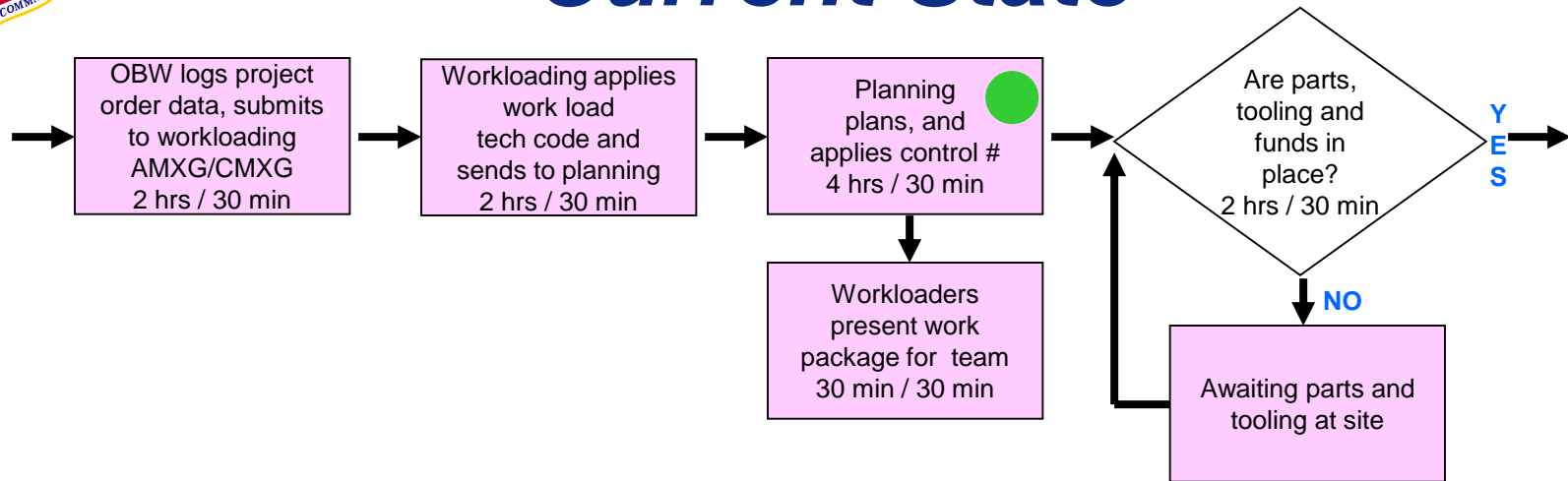


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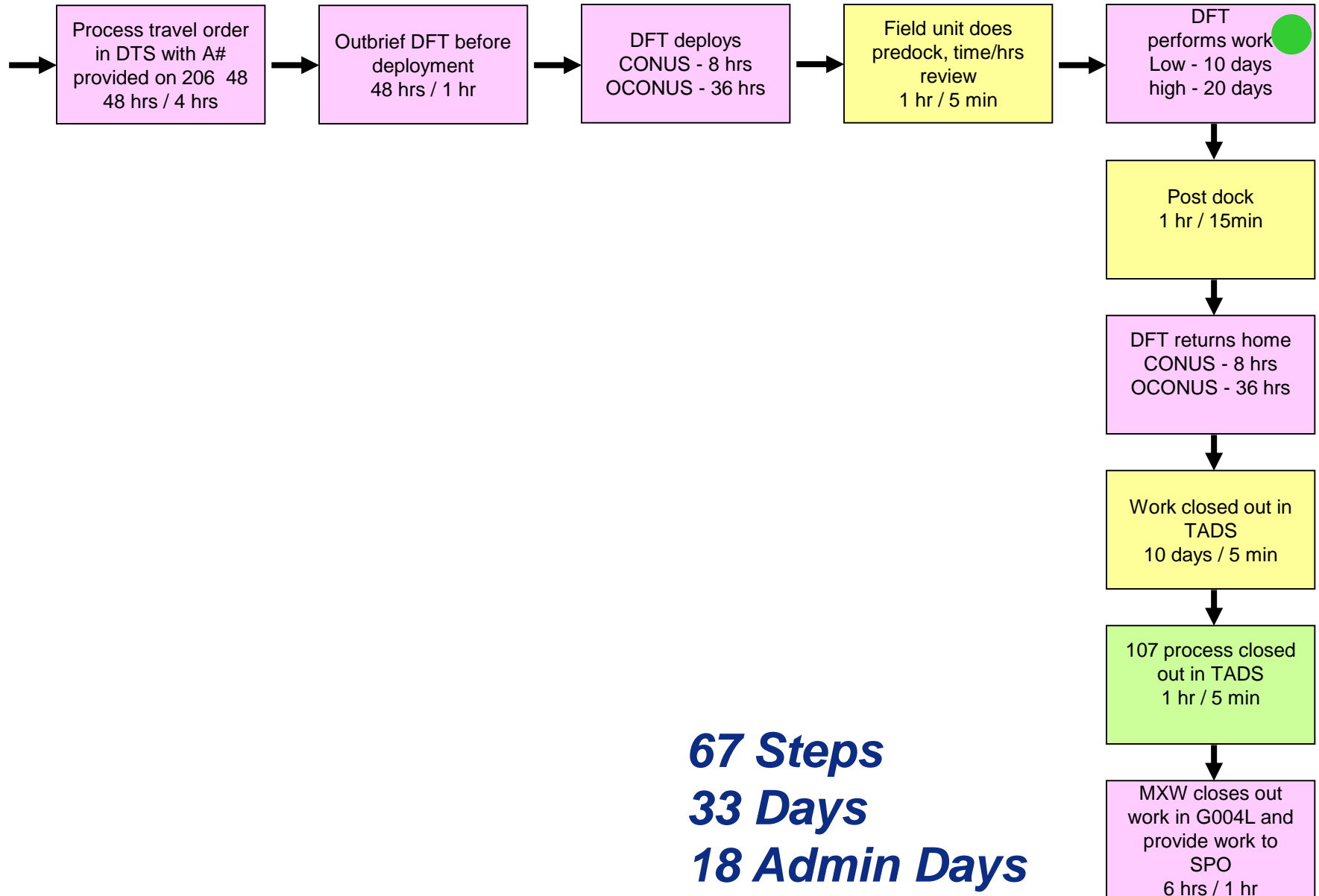


Current State



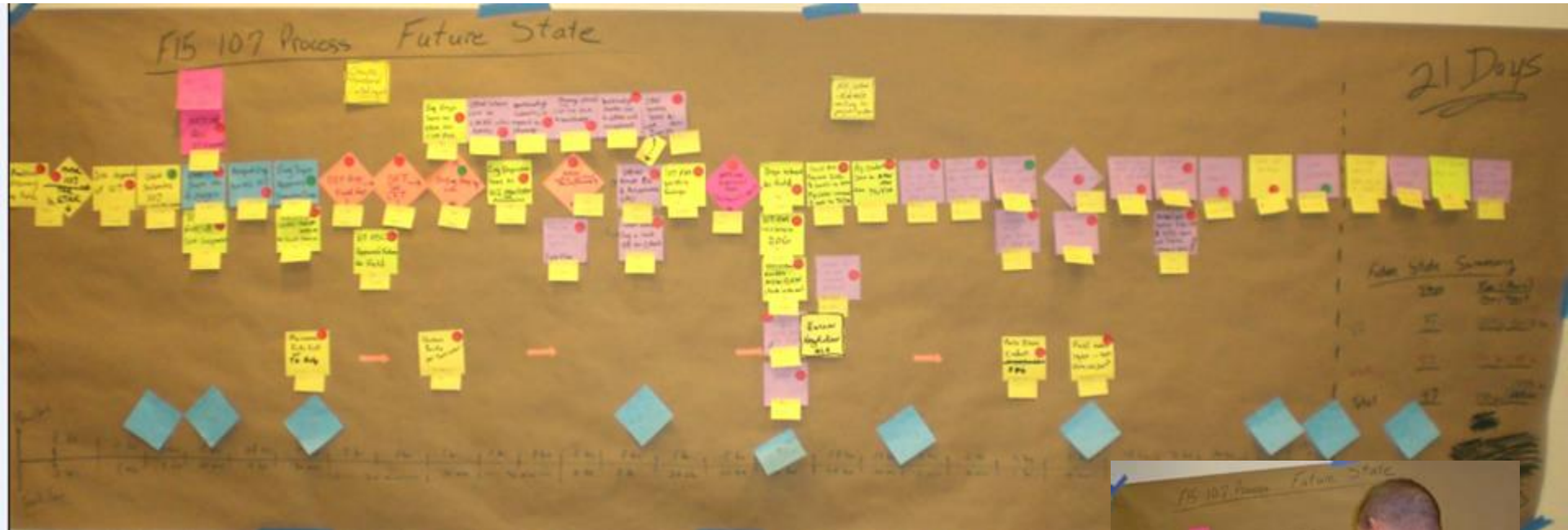


Current State





Future State Map



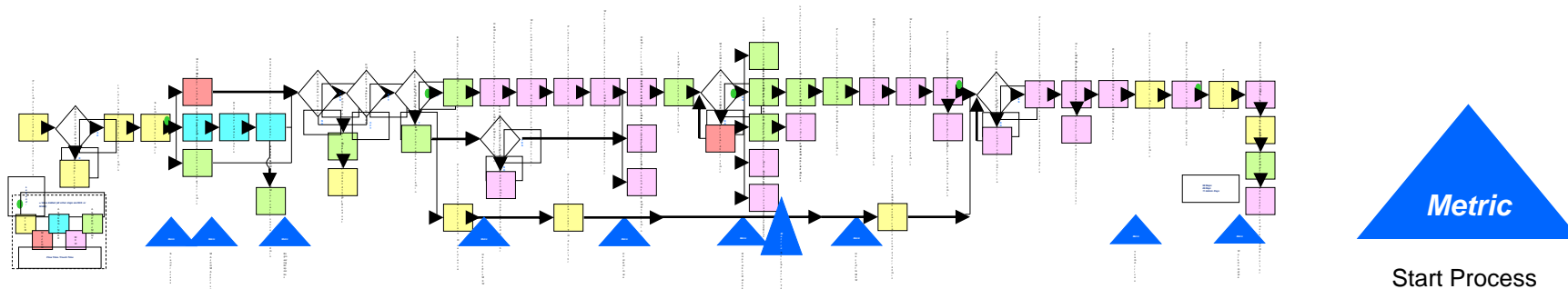
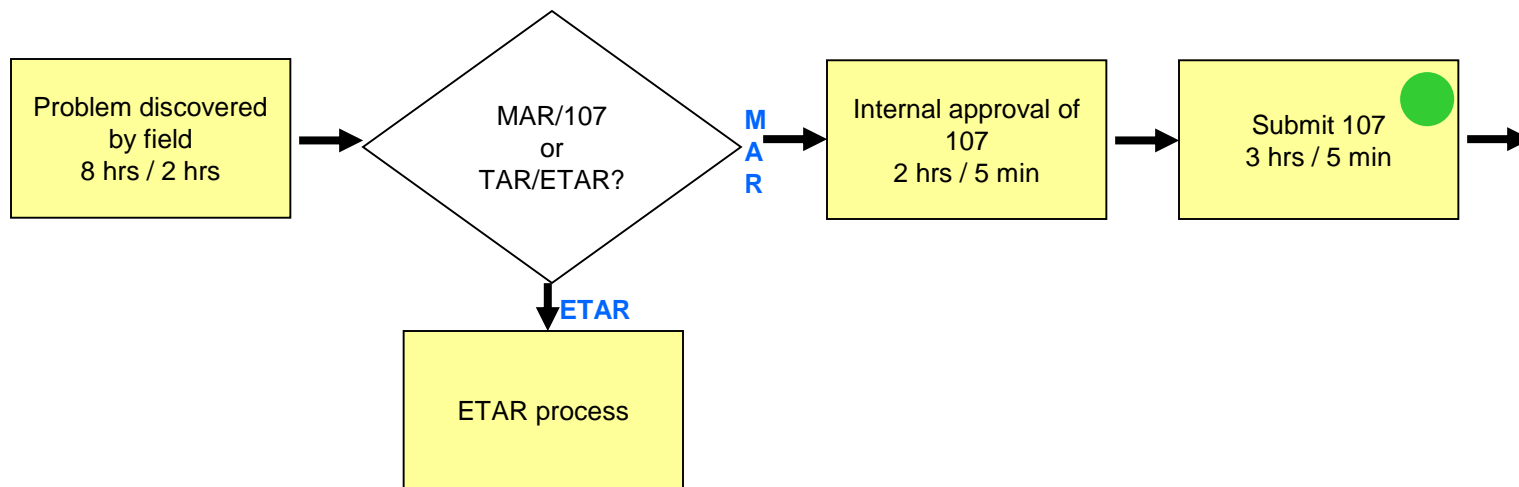
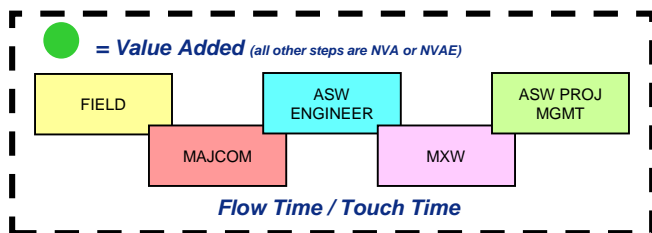
Key Improvements

- **80 % of the tasks are based on pre-approved funding, cataloged tasks with all costing, parts lists, and equipment needs pre-determined**



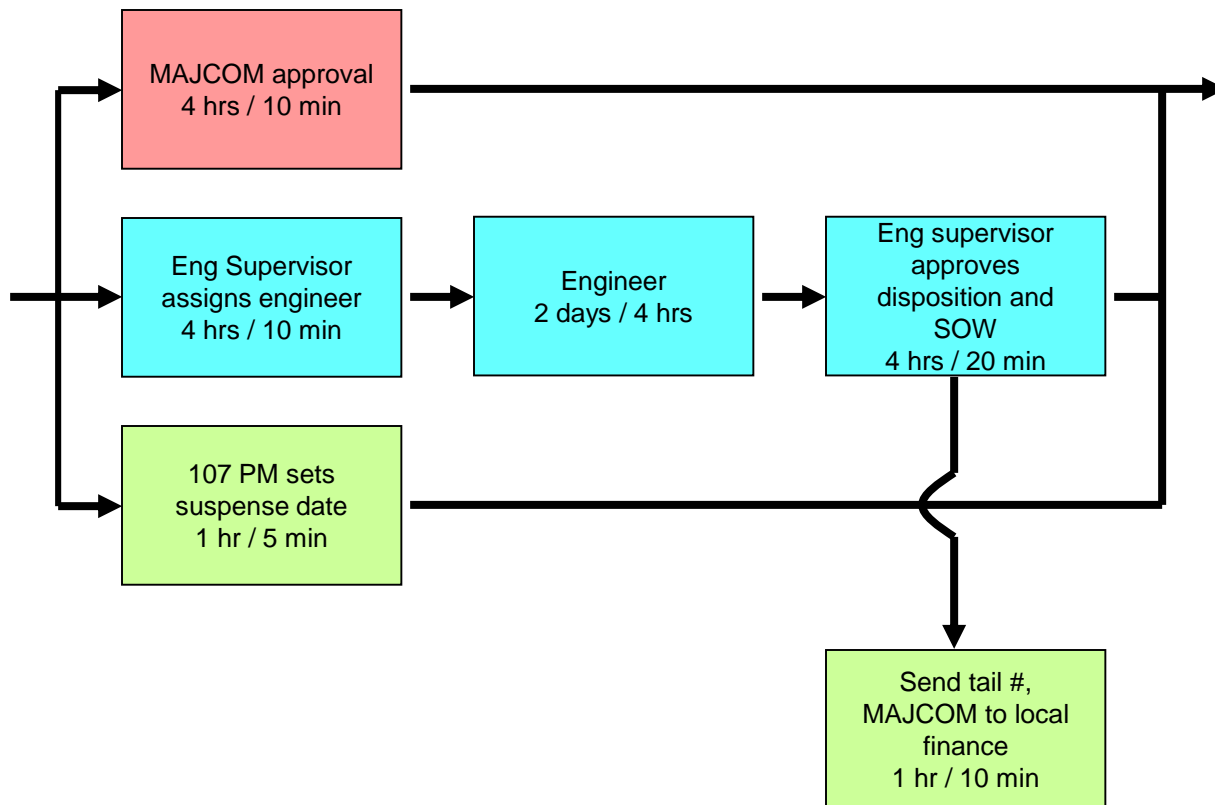
Future State Map

Legend:





Future State Map



Metric

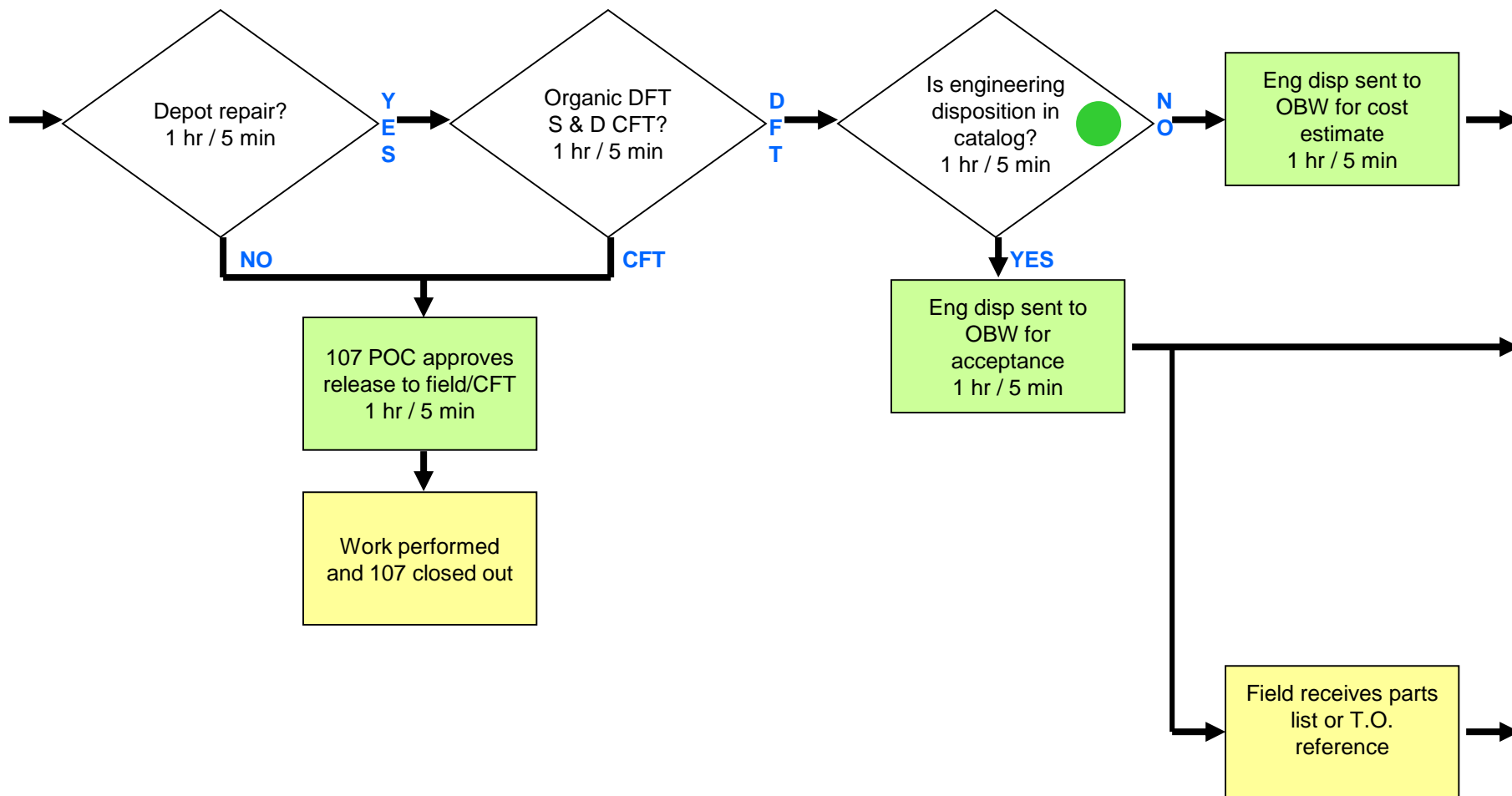
MAJCOM Approval

Metric

Engineering Disposition

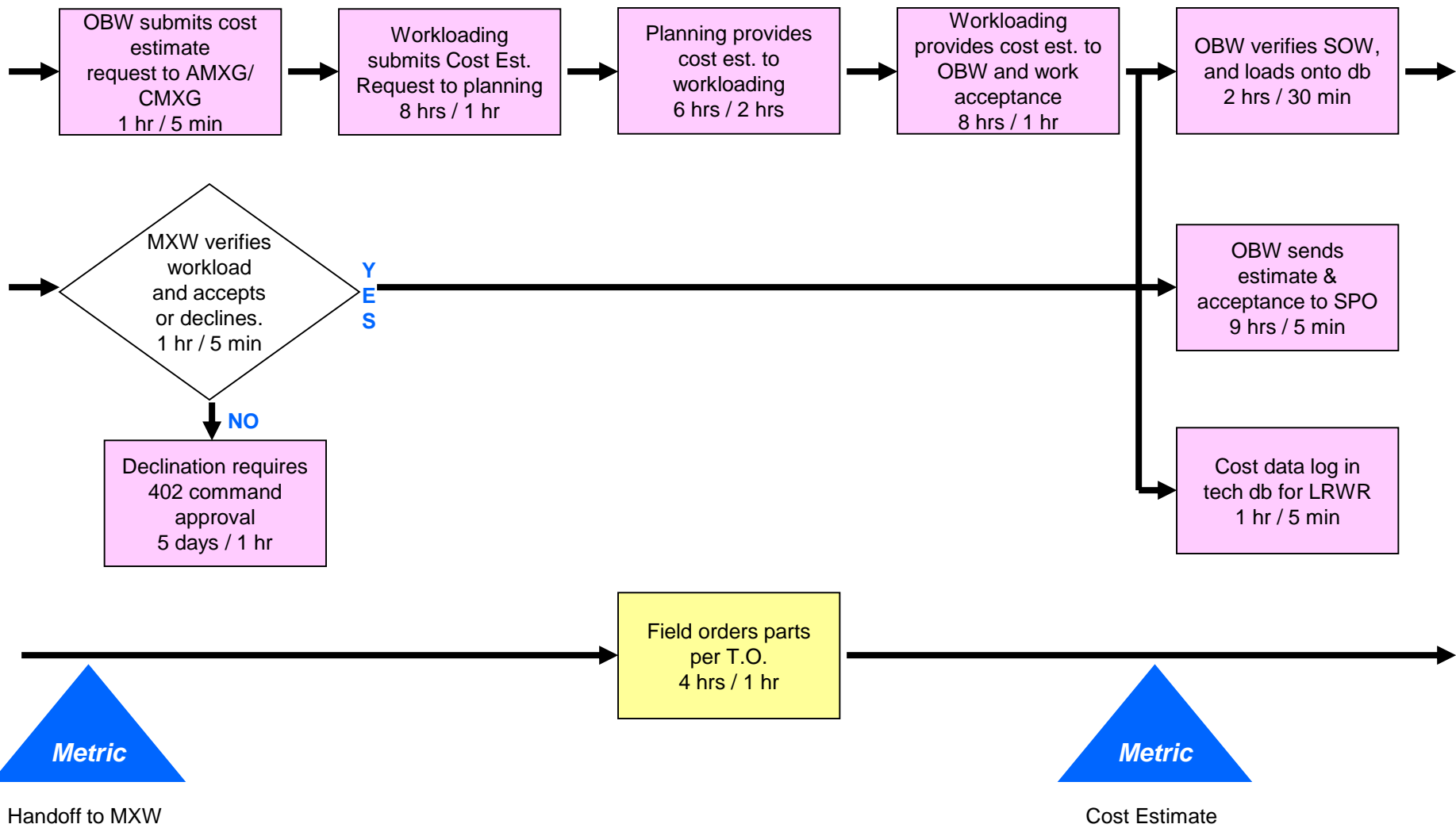


Future State Map



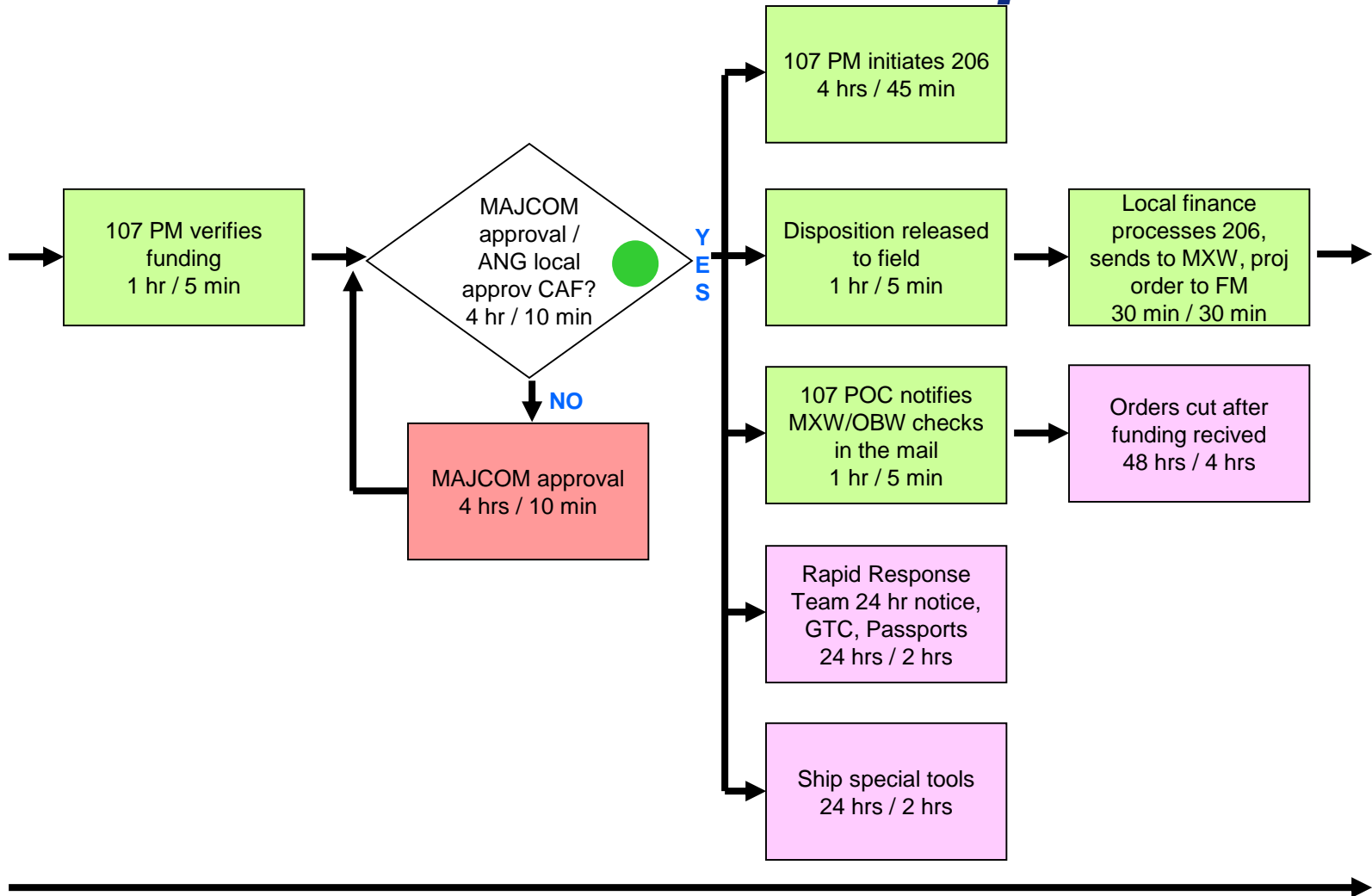


Future State Map





Future State Map



Metric

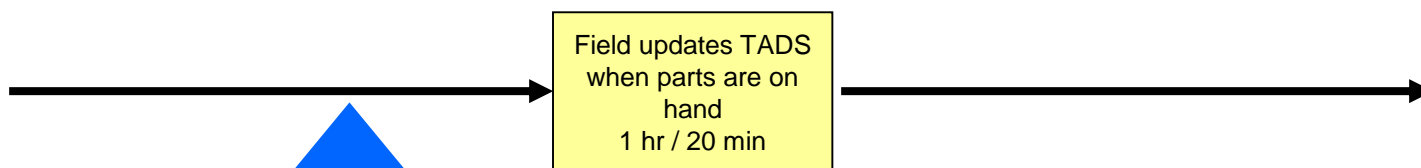
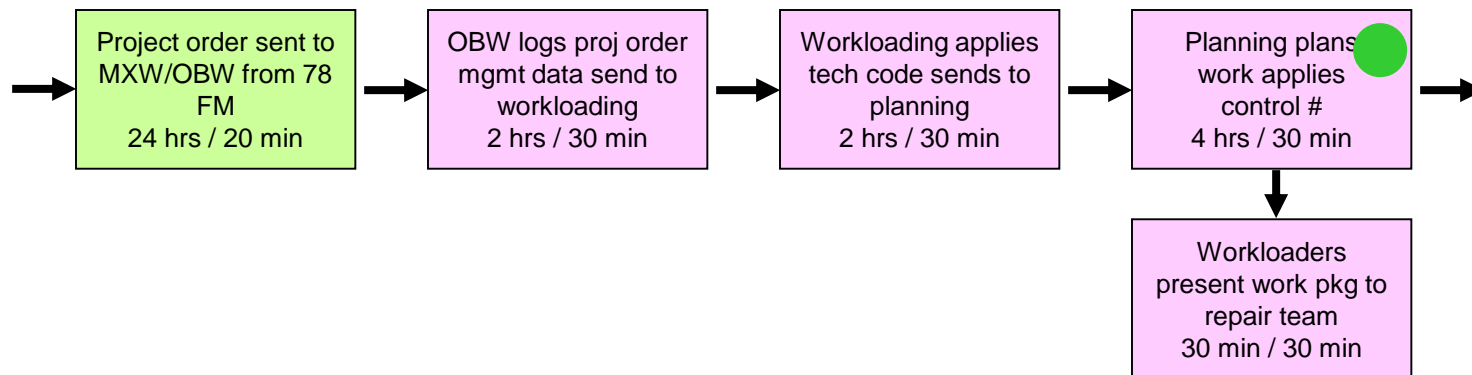
Disposition Released

Metric

Ship Special Tools



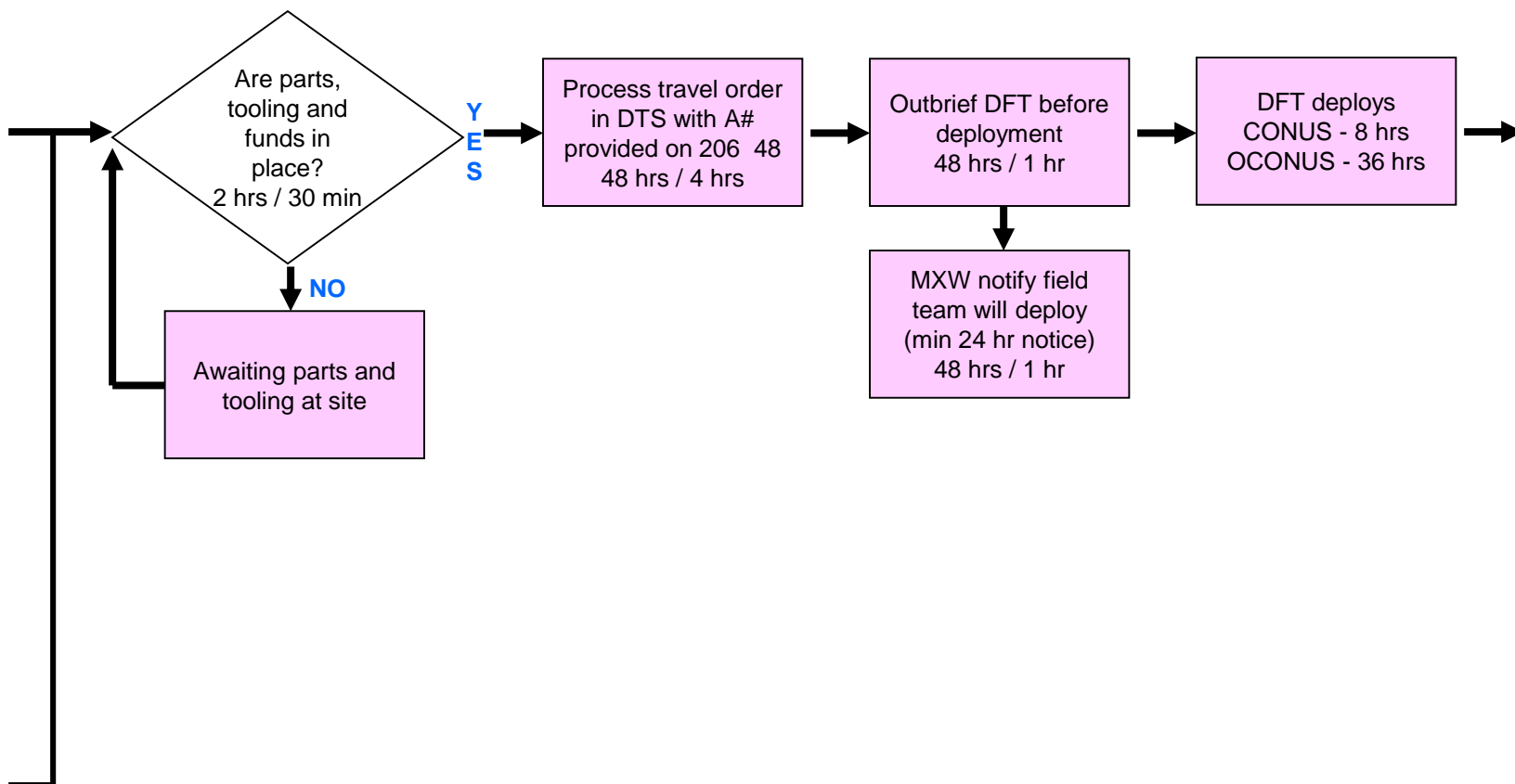
Future State Map



Handoff to MXW

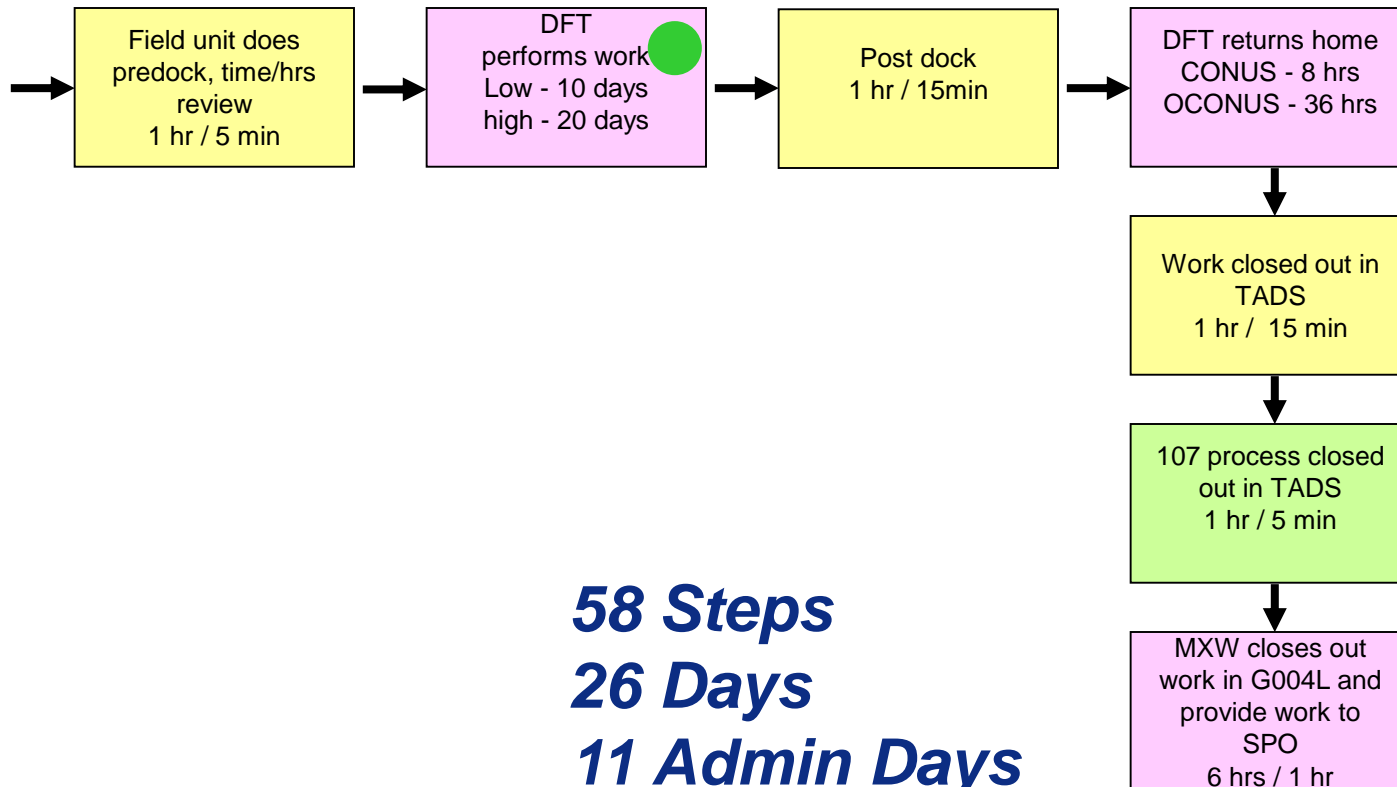


Future State Map

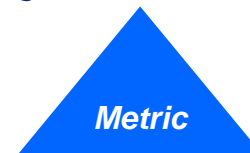




Future State Map



Team Arrives



Work Complete



Future State Assumptions

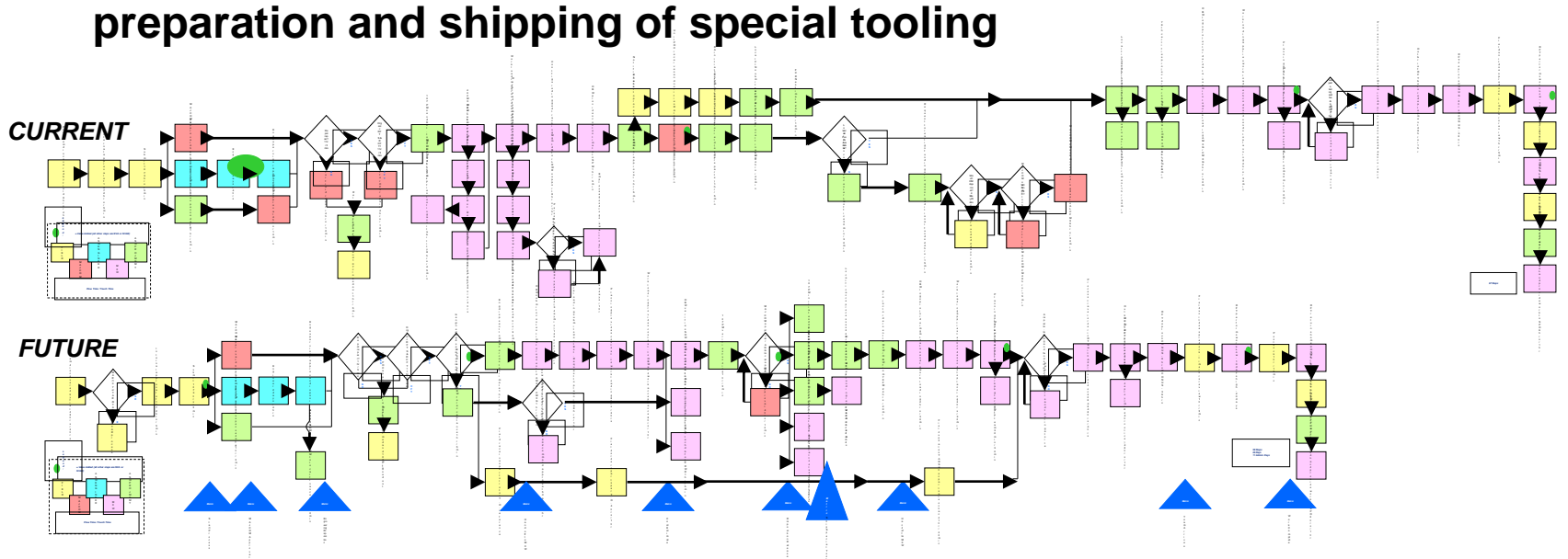
- **Pre-approved MAJCOM funding**
- **MXW accepts all work / no disapproval**
- **MXW provides catalog items for new process flow**
- **Catalog must identify specific job requirements**
- **Catalog will include estimated cost (not to exceed)**
- **Catalog will incorporate historical 107 requests**
- **All stakeholders have access to catalog**
- **Rapid response teams created and prepared**
- **Advance notice of estimated cost to GFFA**
- **MX Wing does not have to wait for project order**
- **Process measurements, tracking, and reporting established to ensure process improvement**
- **Governing guidance amended, operating instructions, and checklists established to institutionalize the process**






Key Process Improvements

- Key improvements were made by running steps in parallel instead of series. MAJCOM funding pre-approval, standard catalog work, rapid response teams, and providing selected information at earlier stages of the process enabled flow time reduction. For example:
 - Running funding concurrently with planning
 - Near simultaneous release of the 206, disposition release to field, funding notification, maintenance team notice, and tool shipment
 - Catalog pre-planning enables earlier parts ordering, and identification, preparation and shipping of special tooling





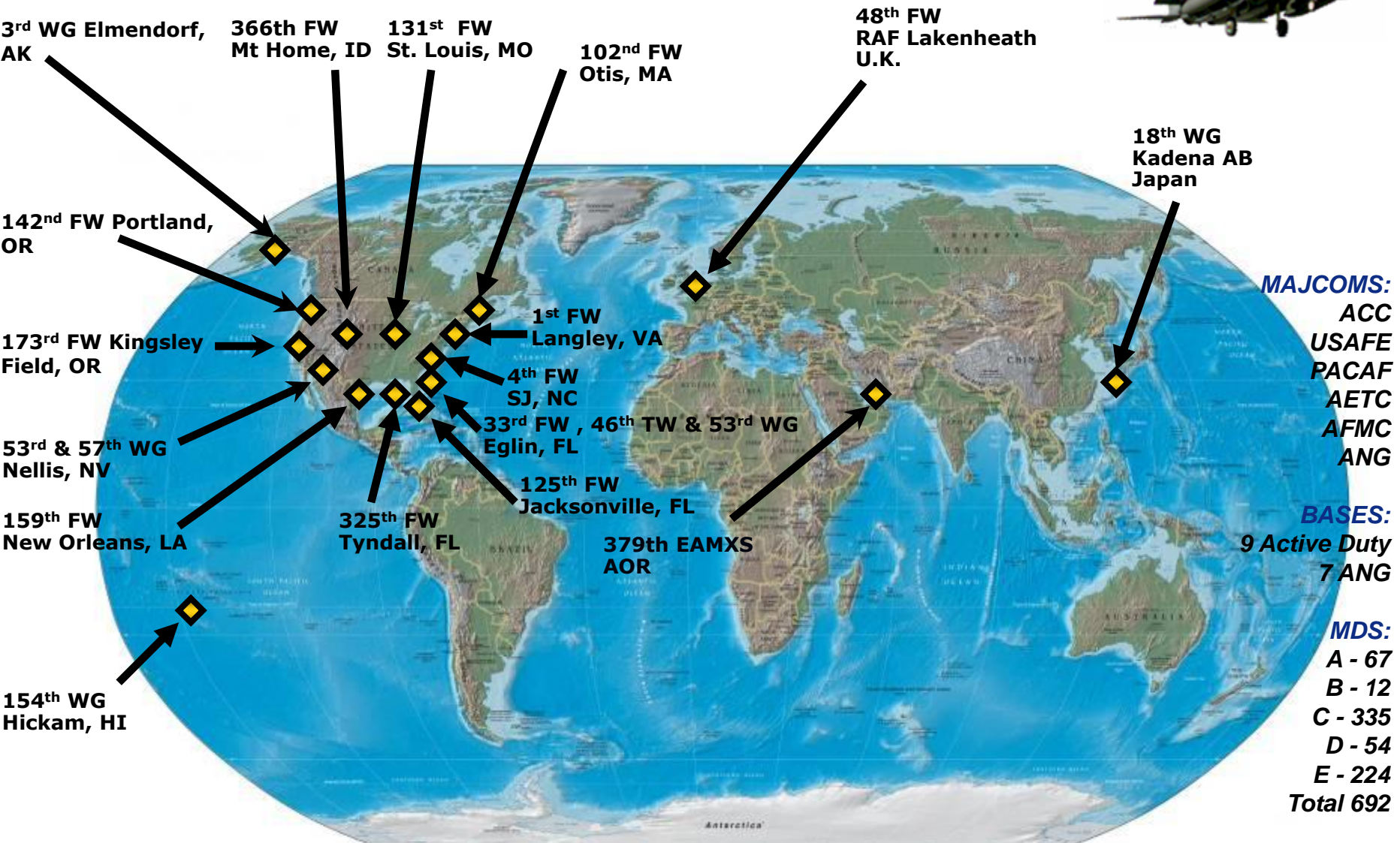
Improvement Summary / Potential Impact

	Current State	Future State	Difference	% Change
Total Flow Time (per 107)	792 hrs (33 days) <i>(18 admin days)</i>	639 hrs (26 days) <i>(11 admin days)</i>	7 days	39% ↓
Total Touch Time (per 107)	174 hrs (7 days)	170 hrs (7 days)	0	0
VA Steps	5	5	0	0
NVA Steps	62	53	9	15% ↓
Total Steps	67	58	9	13% ↓

CAF Impact Potential to AA: 4-6 Jets Annually!



F-15 Operating Locations



3rd WG Elmendorf, AK

366th FW Mt Home, ID

131st FW St. Louis, MO

102nd FW Otis, MA

48th FW RAF Lakenheath U.K.

18th WG Kadana AB Japan

142nd FW Portland, OR

173rd FW Kingsley Field, OR

53rd & 57th WG Nellis, NV

159th FW New Orleans, LA

154th WG Hickam, HI

1st FW Langley, VA

4th FW SJ, NC

33rd FW, 46th TW & 53rd WG Eglin, FL

125th FW Jacksonville, FL

325th FW Tyndall, FL

379th EAMXS AOR

MAJCOMS:
 ACC
 USAFE
 PACAF
 AETC
 AFMC
 ANG

BASES:
 9 Active Duty
 7 ANG

MDS:
 A - 67
 B - 12
 C - 335
 D - 54
 E - 224
Total 692



Key Actions to Reach Future State

ACTION PLAN TIMELINE

	AUG		OCT	NOV	FEB
EVENTS					
PROJECTS	MAJCOM funding pre-approval (OPR: ACC/A4F15)	Establish method of reporting (OPR: 402 AMXG/MXACWW)	Catalog Construction (OPR: ACFG/FFE)		Est. Rapid Response Teams (OPR: 402 MXW/DV)
JUST-DO-ITS	Advance notice to GFLA (OPR: 568 ACSS/GFLA)	Develop common repair kit (OPR: 568 ACSS/GFL)	Publish 107 reporting guidelines (OPR: ACC/A4F15)	MXW Catalog (OPR: MXW/AMXG/CMXG)	
	Open job w/certified 206 (OPR: 402 MXW/OBW)	Quality checklists for ver. (OPR: 402 OBWMXACW)	Std policy to update similar repairs (OPR: ACW/EN)	Maintain Catalog (OPR: 402 AMXG/MXACW)	Est Catalog revision process (OPR: 402 AMXG/MACW)
		Process to close out 6004L/report to SPO (OPR: 402 AMXG/CMXG)	Close out in TADS (OPR: 4ACC/A4F15)		



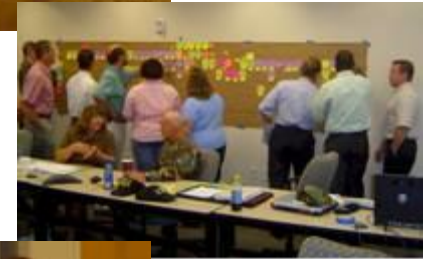
Project Plan

Task Name	Qtr 3, 2007			Qtr 4, 2007			Qtr 1, 2008			Qtr 2, 2008		
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
MAJCOM funding pre-approval	ACC/A4F15											
ASW Catalog Construction (SOW) (1st Release)	830 ACSG/FFE											
MXW Catalog (Pricing)	AMXG,CMXG											
Ready Response Team	402 MXW /DV											
Maintain Catalog List	AMXG/MCAW											
Advance notice to GFFA	568 ACSS/GFLA											
Establish Catalog Review Process and Review Cycle	AMXG/MCAW											
Open job with certified 206	402 MXW /OBW											
Establish method to report team schedule to field	AMXG/MXACW W ,CMXG/MXCOW B											
Develop a common repair kit to complement catalog repairs	568 ACSS/GFL											
Quality checklists development / implementation for verification process	402 MXW /OBW ,AMXG/MXACW W ,CMXG/MXCOW B											
Publish expanded 107 and 105 detailed reporting guidelines	ACC/A4F15											
ASW determine standard/policy to update multiple similar repairs in T.O.	ASW /EN											
Brief process at Commanders' Conference	ACC/A4F15,568 ACSS/GFLA											
Establish process to close out work in G004L and provide report to SPO	AMXG/MXACW W ,CMXG/MXCOW B											
Inject UDLM process requirements into ECSS	568 ACSS/GFLA											
Establish controls/procedures to close out work in TADS in timely fashion	ACC/A4F15											
Establish method to track and report process metrics	ASW											
Establish performance standards for process metrics	ASW ,402 MXW ,ACC/A4F15											



Potential Constraints

- **Critical to Implementation**
 - Pre-approved funding
 - Pre-positioned funding
 - Rapid Response Team formation
 - Timely completion of catalog
- **Long Range Impacts to Future State**
 - CLSS
 - CAM
 - GLSC
 - ECSS





Lessons Learned

- ***“We have a group of people who truly want to do what’s right and make a difference. It’s all the bureaucratic “BS” that keeps us from doing what we need to do.” We can eliminate bureaucracy!***
- ***“I didn’t realize the constraints that other groups are dealing with”***
- ***Current measures of downtime can hide the problems (ex: B Time reporting – field vs. ACC view)***
- ***“I didn’t realize all the personnel issues and potential delays” (ex: filling lists of personnel, travel card issues, etc..)***
- ***Consistent theme: need pre-approved, pre-positioned funding!***
- ***Huge need for improved communication flow with all the people who touch the process. It’s critical for everyone to know what’s going on behind the scenes. The customer especially needs to know WHY there are delays and what’s being done to expedite the process.***
- ***Work load priorities have historically been based on what resources were available instead of the needs of the customers (MAJCOMs must provide priority needs – higher level view)***
- ***The timing between steps reveals opportunities to improve that will make a big difference!***





Broader Implications

- **While this event focused in detail on the F-15 DFT process, the process is not unique to the F-15. As such, potential savings in aircraft availability may also be realized across other weapon systems.**
- **Additional benefits may be realized as process variability is decreased as a result of improved process definition.**



Recommendations

- **Push for pre-approved, pre-positioned funding. This is the key to making the process flow as efficiently and effectively as possible.**
- **Capture process improvements from this event and translate to all other MDSs**
- **Brief proposed process at Commander's Conference (ACC & ASW joint effort)**
- **Get process requirements into ECSS**



Air Combat Command

Questions?



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Air Combat Command

Backups and Support Material



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Parking Lot

- **Work not closed out in TADS in a timely fashion**
- **Requirement to get process requirements into ECSS**
- **Share actual cost w/ SPO after DFT completed**
- **Initial -107 need to know: verification process, shifts, weekends, ops check processes after mx**
- **MAJCOMs fund parts with DEPM funds (like the guard)**
- **Advance notification of funding requirements to ASW/GFFA**
- **Transportation options for parts and tooling**
- **Optical tooling prioritization and utilization**
- **MAJCOM provide prioritization input on -107**
- **TADS tell you when parts available**
- **Brief process at commanders' conference**
- **Handling of selection 'recycle' for DFT volunteers and alternates**
- **3 times -107 to update field tech data – for a/c as well as commodities**
- **D/CFT bring part and exchange with unit for due-in to accelerate repair response time**



Parking Lot (cont.)

- **Legible 185s (funding line)**
- **24 hr delay from 185 to SCRN & expendable funds**
- **When does unit code to depot status (DJ) on -107 submit**
- **Kit bench parts w/ D/CFT (fasteners, etc.) – remove acquisition from schedule lead time**
- **Prioritization: capture “need” information in -107s; visibility of priority change drivers**
- **Multi-shift scheduling for D/CFT: include in request; cost/labor impact**
- **Scheduling weekends, holidays, extra hours (standard expectations to costs/needs)**
- **Egress (Kirtland) -107s: no feedback**
- **How will the 202 process roll into the -107 process**
- **No cost -107 (pre approval) – need to formalize**
- **Capitalize on previous lean events (also other MDS)**
- **Push toward commonality across the MDSs**



Potential Improvement Areas

Brainstorming

- **Rapid Response Teams (RRT)**
- **Concur report repairs can be priced out up front**
- **Fixed price cost estimate (verticals, wings, fuselage...)**
- **108 detailed AOR; keep it unclassified; request for continuous work...**
- **Advance notification of parts needed to field ASAP**
- **Modify TADS for parts available notification (RRT)**
- **Debrled parts list from OBW or Workloading to submit to field advance notice prior to funds approved**
- **Up front notice**
- **Watch DFT funding closely when funding is running low; req yearly funding adjustments through LG**

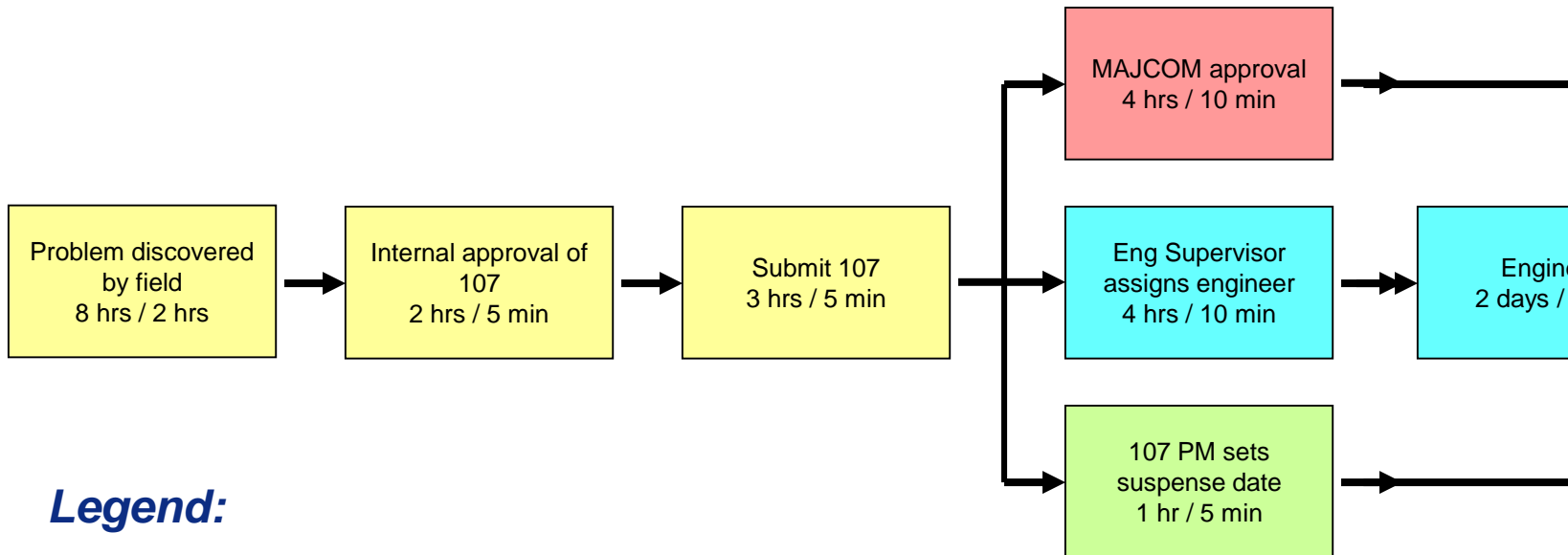


Potential Improvement Areas Brainstorming (cont.)

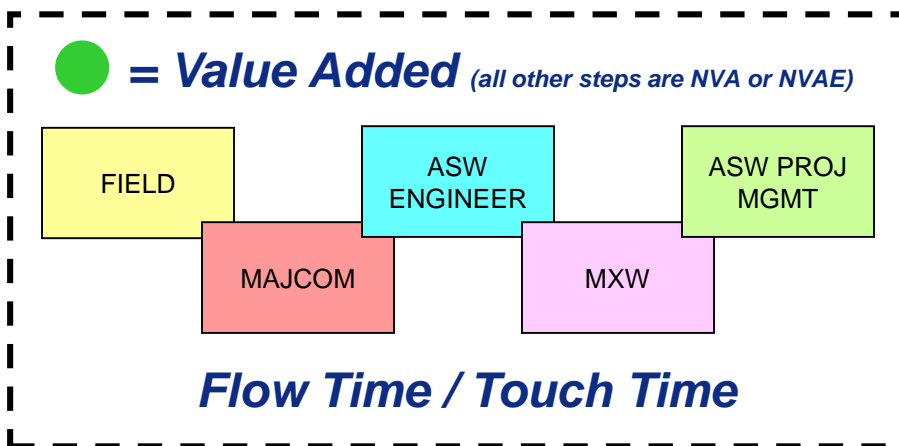
- **Under CAM simplified with fewer PCNs to management**
- **Close out TADS timely (when singing 195)**
- **Auto email to MAJCOM on no-cost 107 approvals. We now to do it but they still want to know.**
- **Automated MAJCOM system in J025A & G004L; right now email or phone to contact**
- **After work complete need G004L / DIFM closeout with 5 days to minimum ??**
- **?? if available ??**
- **TADS implemented and utilized by MXW: team departs, funding in place, parts available, SOW approved**



Current State Map (Full Diagram)

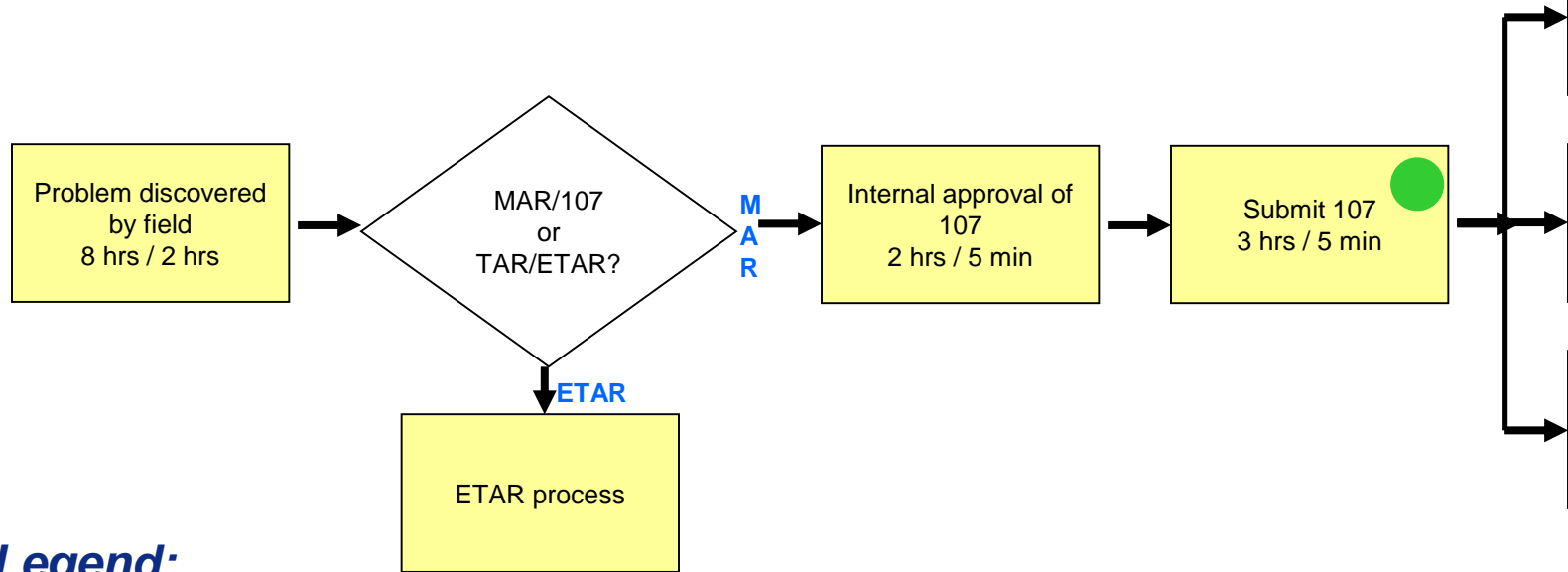


Legend:





Future State Map (Full Diagram)



Legend:

