

# Service Road Map Legend

FY 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025

ATC-Separation Assurance / Separation Management

TM-Synchronization / Trajectory Management

TM-Strategic Flow / Flow Contingency Management (Strategic Flow)

Airspace Management / Capacity Management (Airspace)

ATC-Advisory & Flight Planning, Emergency and Alerting, Infrastructure-Information Management / Flight and State Data Management

## Key

### •NAS EA Service / NIP Function

•Near-Term Commitment

•2008-2012

•MidTerm Capability

•2012 -2018

•Far Term Capability

•FAA Is Not OPR

Delivery

•(Initial Operating Capability targeted within the box)

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# Initiate Trajectory-Based Operations 1 Of 2

FY 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025

Delegated Responsibility for In-Trail Separation 102118

Oceanic In-trail Climb and Descent 102108

Automation Support for Separation Management 102137

ADS-B Separation 102123

Automated Negotiation/Separation Management 104121

Reduce Horizontal Separation Standards, En Route - 3 Miles 102117

Reduced Oceanic Separation and Enhanced Procedures 102136

Flexible Routing 102146

Self Separation Airspace-Oceanic 102147

Self-Separation Airspace Operations 102148

*ATC Separation Assurance / Separation Management*

Initial Conflict Resolution Advisories 102114

Flexible Entry Times for Oceanic Tracks 104102

Automated Support for Trajectory Negotiation 104105

Automated Support for Conflict Resolution 104127

Point-in-Space Metering 104120

Trajectory Based Management Gate-to-Gate 104126

*TM Synchronization / Trajectory Management*

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# Initiate Trajectory-Based Operations 2 Of 2

FY 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025

*TM Strategic Flow / Flow Contingency Management (Strategic Flow)*

Flexible Airspace Management 108206

Increase Capacity and Efficiency Using RNAV and RNP 108209

Flow Corridors – Level 1 Static 108105

Flow Corridors – Level 2 Dynamic 108106

Dynamic Airspace Performance Designation 108213

*Airspace Management / Capacity Management (Airspace)*

Provide Interactive Flight Planning from Anywhere 101103

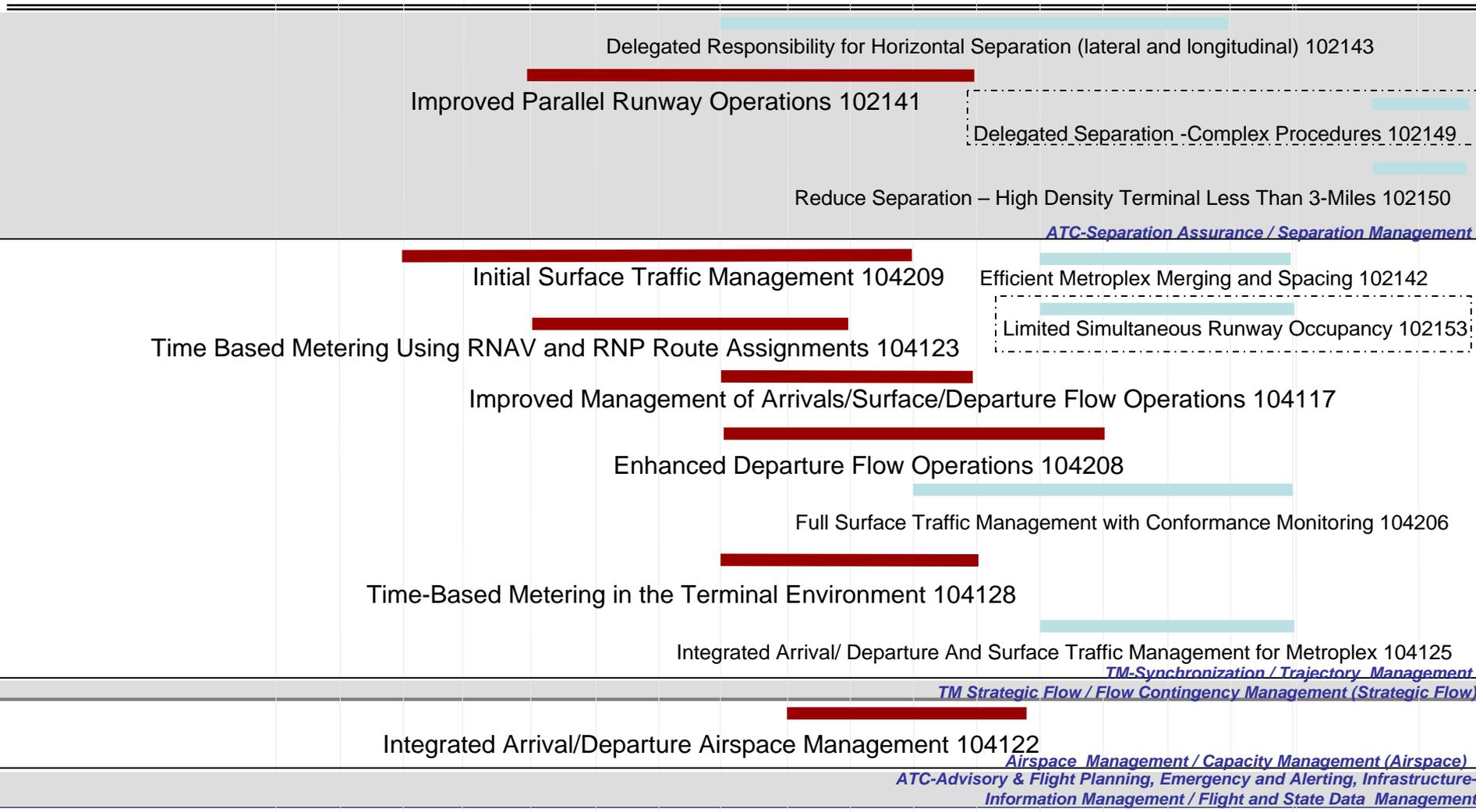
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# Increase Arrivals/Departures at High Density Airports

FY 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025

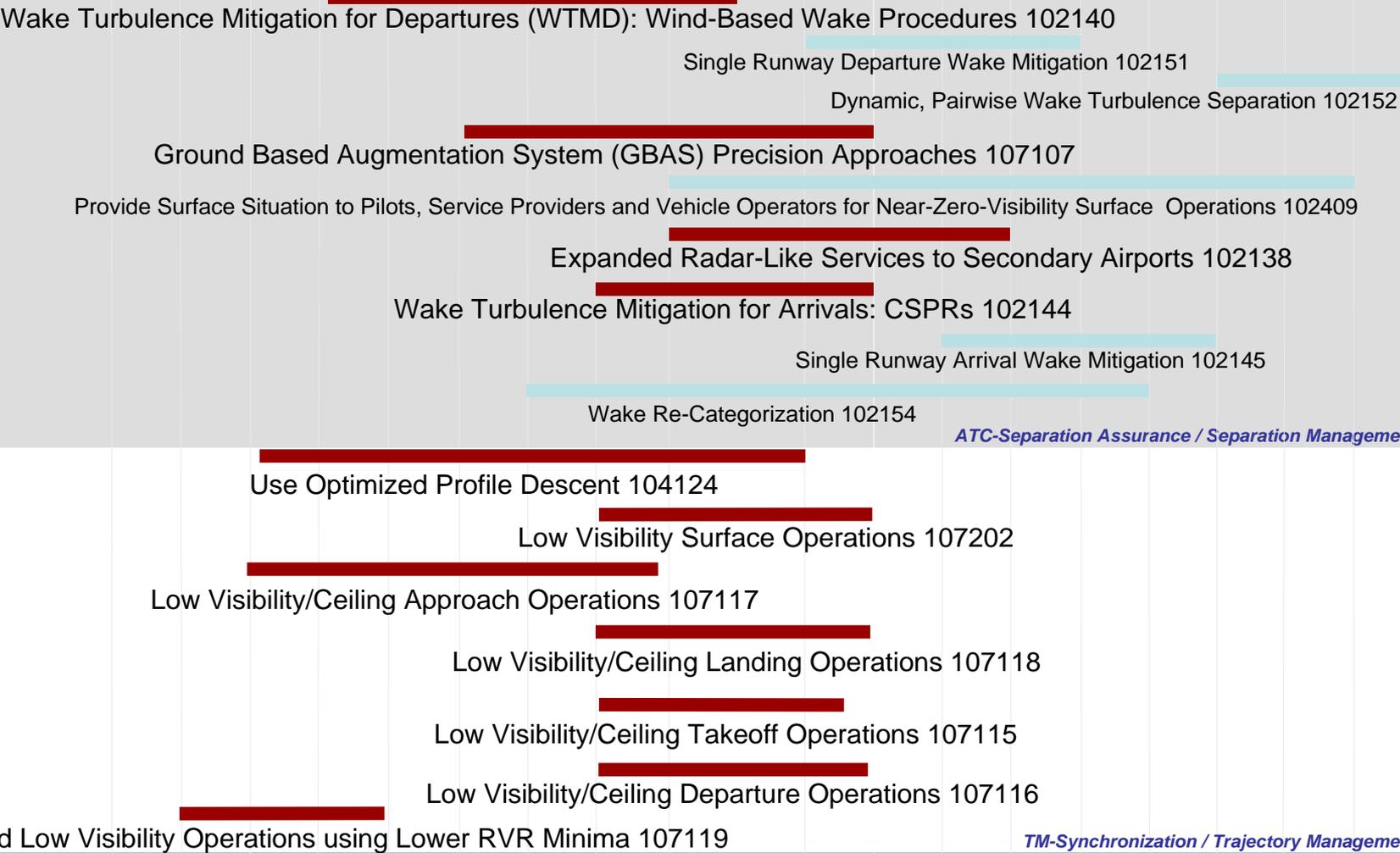


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# Increase Flexibility in the Terminal Environment (1 of 2)

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# Increase Flexibility in the Terminal Environment (2 of 2)

FY

2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025

*TM-Strategic Flow / Flow Contingency Management (Strategic Flow)*

*Airspace Management / Capacity Management (Airspace)*

Expanded Traffic Advisory Services Using Digital Traffic Data 103206



Provide Full Surface Situation Information 102406

Enhanced Surface Traffic Operations 104207

Improved Runway Safety Situational Awareness for Controllers 103207

Improve Runway Safety Situational Awareness for Pilots 103208

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Information Management / Flight and State Data Management*

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# Improve Collaborative ATM

FY 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025

*ATC-Separation Assurance / Separation Management*

*TM-Synchronization / Trajectory Management*

Continuous Flight Day Evaluation 105302

Traffic Management Initiatives with Flight Specific Trajectories 105208

Full Collaborative Decision Making 105207

*TM-Strategic Flow / Flow Contingency Management (Strategic Flow)*

Improved Management of Special Activity Airspace 108212

*Airspace Management / Capacity Management (Airspace)*

Provide Full Flight Plan Constraint Evaluation with Feedback 101102

On-Demand NAS Information 103305

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# Reduce Weather Impact

FY 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025

*ATC Separation Assurance / Separation Management*

Full Integration of Weather Information into NAS Automation and Decision Making 103123

*TM Synchronization / Trajectory Management*

Initial Integration of Weather Information into NAS Automation and Decision Making 103119

*TM Strategic Flow / Flow Contingency Management (Strategic Flow)  
Airspace Management / Capacity Management (Airspace)*

Initial Improved Weather Information from Non-Ground Based Sensors 103116

Deploy FIS-B Nationally 103104

Full Improved Weather Sensor Network 103122

Full Improved Weather Information and Dissemination 103121

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Information Management / Flight and State Data Management*

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# Increase Safety, Security, and Environmental Performance

FY 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025

*ATC-Separation Assurance / Separation Management*

*TM-Synchronization / Trajectory Management*

*TM-Strategic Flow / Flow Contingency Management (Strategic Flow)*

*Airspace Management / Capacity Management (Airspace)*

Enhance Emergency Alerting 106202

**Safety**

ASIAS-Information Sharing and Emergent Trend Detection 109303

Enhanced Aviation Safety Information Analysis and Sharing 109304

Improved Safety for NextGen Evolution 109305

Increased International Cooperation for Aviation Safety 109306

Improved Safety Across Air Transportation System Boundaries 109307

Enhanced (Automated) Aviation Safety Information Sharing and Analysis Scope and Effectiveness 109308

*ATC-Advisory & Flight Planning, Emergency and Alerting, Infrastructure-Information Management / Flight and State Data Management*

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# Increase Safety, Security, and Environmental Performance

FY 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025

*ATC-Separation Assurance / Separation Management*

*TM-Synchronization / Trajectory Management*

*TM-Strategic Flow / Flow Contingency Management (Strategic Flow)*

*Airspace Management / Capacity Management (Airspace)*

  
Operational Security Capability for Threat Detection and Tracking, NAS Impact  
Analysis and Risk-Based Assessment 109302

  
Operational Security Capability with Dynamic Flight Risk Assessment  
for Improved Security Airspace Planning and Management 109317

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Information Management / Flight and State Data Management*

**Security**

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# Transform Facilities

FY 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025

*ATC-Separation Assurance / Separation Management*

*TM-Synchronization / Trajectory Management*

*TM Strategic Flow / Flow Contingency Management (Strategic Flow)*

NAS Wide Sector Demand Prediction and Resource Planning 105104

*Airspace Management / Capacity Management (Airspace)*

Remotely Staffed Tower Services 109402

Automated Virtual Towers 109404

Business Continuity Services 109405

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## **Service Roadmap Changes**

### **November 2009**

#### **WX**

- Move 103119 from the TM Synchronization / Trajectory Management swim lane to the TM Strategic Flow / Flow Contingency Management (Strategic Flow) swim lane
- Moved 103123 from the ATC-Advisory & Flight Planning, Emergency and Alerting, Infrastructure-Information Management / Flight and State Data Management swim lane to the TM Synchronization / Trajectory Management swim lane

### **January 2010**

#### **WX**

- Moved 103121 from Strategic Flow Swim Lane to ATC Advisory Swim Lane

### **March and April 2010 OI Review**

#### **TBO**

- OI # 104120 - Extended date to 2016 to capture the next phase of Extended Metering (dynamic Meter Reference Points) per OI Review
- OI # 102137 – Extend date to 2015 per OI Review
- OI # 108209 – Extend date to 2014 per OI Review
- OI # 104105 “Automation-Assisted Trajectory Negotiation and Conflict Resolution”– Split into two OIs: Amended OI 104105 “Automated Support for Trajectory Negotiation” and added New OI 104127 “Automated Support for Conflict Resolution”
- OI # 102118 – Delegated Responsibility for Horizontal Separation, changed title to Delegated Responsibility for In-Trail Separation

#### **HD**

- OI # 104123 – Extend end date to 2016 (original time 2012-2014). Per OI Review. Rational: 3D-Pam capability cannot be achieved in the original timeframe. Date extended to capture 3D-Pam capability
- OI # 104209 – Changed end date to 2010-2017 (original time 2013-2016). Per OI Review. Rational: Date extension captures timeframe for all expected mid-term Surface TBO capabilities
- OI # 104128 – Time-Based Metering in the Terminal Environment: New OI added. Per OI Review
- OI # 104122 – Integrated Arrival/Departure Airspace Management: Change IOC date range from 2012-2017 to 2016-2019
- OI # 104208 – Changed from Far-Term to Mid-Term OI. Per OI review

#### **Flex**

- OI # 102138 – Change IOC date range from 2016-2025 to 2016-2020. Changed from far-term to mid-term as a result of IOC date range reduction.

Intent is to relax the “one in, one out” rule in a non-radar environment, which we expect to be achievable in the mid-term. OI Review

- OI # 103206 – Added triangle in 2013. Rational: IOC date range is 2009-2010 however the triangle represents full deployment of TIS-B per OI Review.
- OI # 102145 – IOC date range changed from 2020-2022 to 2020-2023
- OI # 102152 -- IOC date range changed from 2025-2030 to 2024-2027
- OI # 102154 – Wake Re-Categorization: New OI added. Per OI review

### **CATM**

- OI # 108212 – Changed Title to “Improved Management of Special Activity Airspace”. Per OI Review.

### **WX**

- OI# 103104 – Extended IOC date range to 2013 from 2010. Per OI Review

### **SSE**

- OI # 109309 – Deleted Level 1 from Title. Per OI Review
- OI # 109310 – Replaced Level 2 in Title with Enhanced. Per OI Review
- OI # 109311 – Deleted Level 1 from Title. Per OI Review
- OI # 109312 – Replaced Level 2 in Title with Enhanced. Per OI Review; Changed from Far-Term to Mid-Term OI. Per OI review
- OI # 109313 – Deleted Level 1 from Title. Per OI Review
- OI # 109314 – Replaced Level 2 in Title with Enhanced. Per OI Review; Changed from Far-Term to Mid-Term OI. Per OI review
- OI # 109315 – Deleted Level 1 from Title. Per OI Review
- OI # 109318 – Implement NextGen Environmental Engine and Aircraft Technologies-Enhanced, New OI added. Per OI Review
- OI # 109306 – Changed from Far-Term to Mid-Term OI. Per OI review
- OI # 109307 – Changed from Far-Term to Mid-Term OI. Per OI review
- OI # 109308 -- Changed from Far-Term to Mid-Term OI. Per OI review

### **Facilities**

- OI # 109405 – Business Continuity Services, New OI added. Per OI review
- OI # 105104 -- Changed from Far-Term to Mid-Term OI. Per OI review