

Space Traffic Coordination for Safety & Sustainability

Office of Space Commerce

Marisel Borowitz
Director of International SSA Engagement

Office of Space Commerce

National Oceanic and
Atmospheric Administration

U.S. Department of Commerce
October 2024



OSC: Enabling the Space Industry



The Office of Space Commerce (OSC) seeks to enable a world-leading U.S. space industry and ensure that the United States remains the flag of choice for space businesses and operations.

Advocacy

- Coordinate government-wide commercial policy issues and actions.
- Pursue the removal of legal, policy, institutional barriers to space commerce.
- Act as an industry advocate within the Executive Branch.

Operations

- Execute the civil space situational awareness (SSA) mission.
- Enable safe space operations for the preservation of human lives, business assets, and the space environment.
- Support global standards and best practices for SSA.

Regulation

- License U.S. operators of private remote sensing systems.
- Monitor licensees for compliance with U.S. law and regulation.
- Protect national security, foreign policy, and international obligations.

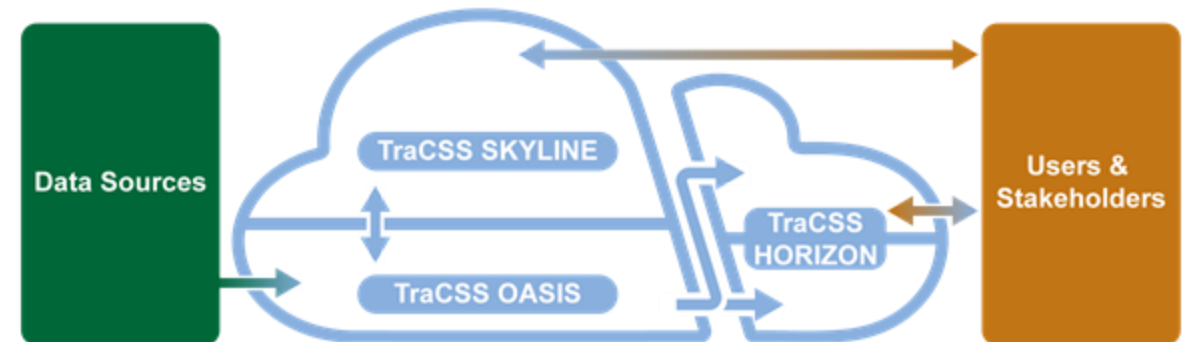
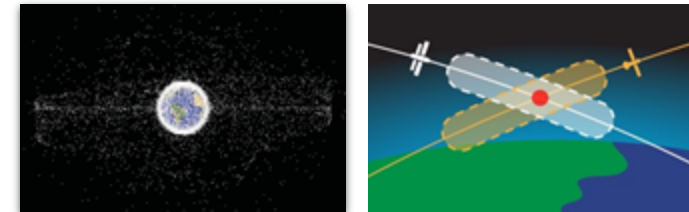


Traffic Coordination System for Space (TraCSS)

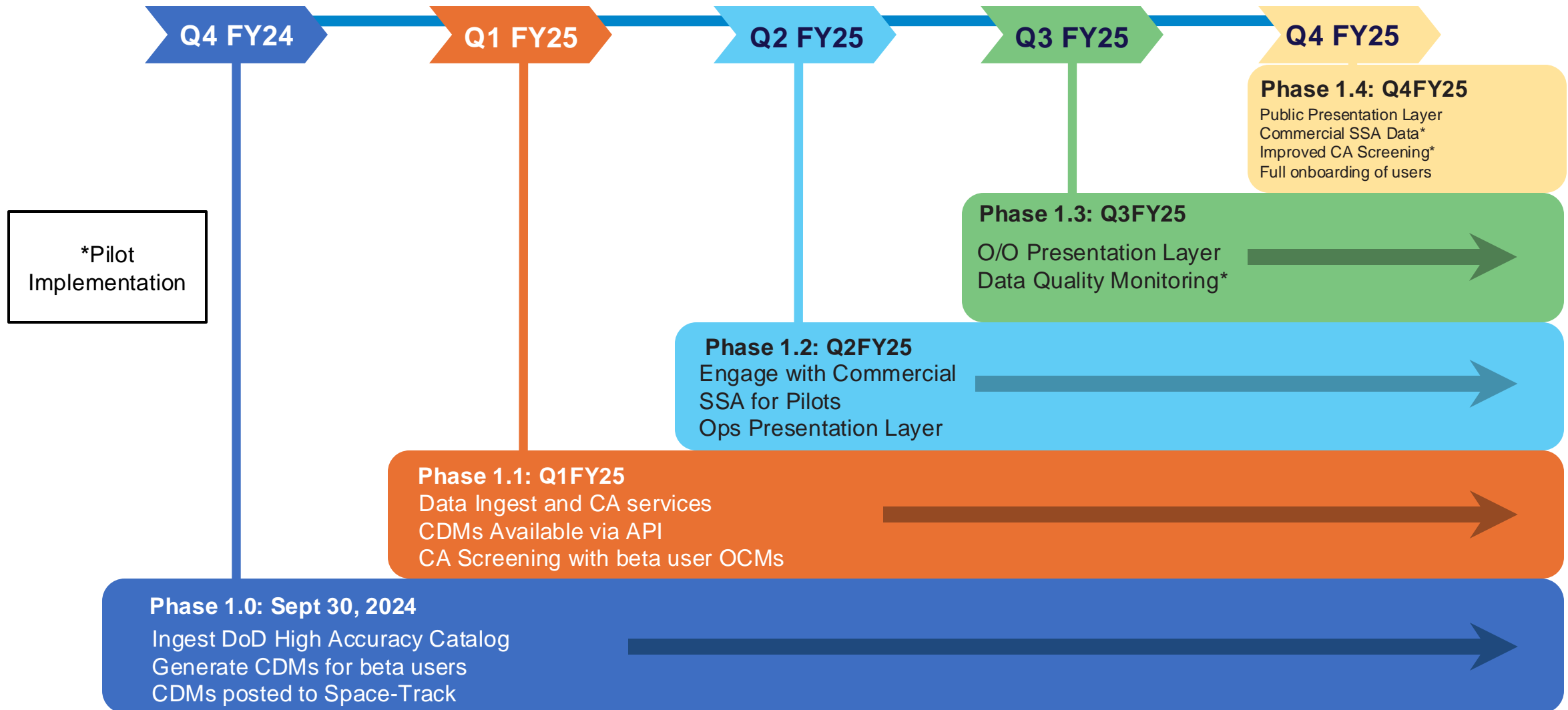


- The Traffic Coordination System for Space (TraCSS) will provide basic SSA data and services.
- Goal is to support support spaceflight safety, space sustainability, and international coordination.
- Services are available to all spacecraft operators and government entities free of charge, as a global public good.
- TraCSS launched in September 2024 and will continue to add capabilities and users over the next year.

TRACSS



Phase 1 Capability Roll-Out Plan: Phased Delivery of Commercial Functionality



TraCSS' Safety Services



TraCSS will provide access to selected SSA data and information to spacecraft operators and governments, including:

- SSA data and information
- Conjunction screening every 4 hours using catalog and o/o ephemerides
- Risk assessment support information
- Detection and notification of emergency events
- Candidate maneuver screening
- Anomaly reporting



TraCSS Data Policy



The TraCSS Data Policy seeks to significantly advance transparency and openness.

- Conjunction Data Messages (CDMs) are shared with the operators involved in the conjunction
 - Countries have access to CDMs for all spacecraft affiliated with their nation
- TraCSS will also support and facilitate free and open sharing of data via our website, with no log-in required, including:
 - TraCSS Satellite database
 - TLE Catalog
 - Owner/operator ephemerides.
 - Emergency event notifications (conjunction messages for events that exceed a defined risk threshold)



World Economic Forum

SSA Data and Information Sharing Principles



- SSA data and information should be made open by default while remaining consistent with national laws and regulations.
- Spacecraft owners/operators should share as openly as possible:
 - up-to-date contact information,
 - ephemerides,
 - manoeuvre plans, and
 - spacecraft characteristics (including size, mass, dimensions and manoeuvre capabilities)
- Spacecraft owner/operator information should be provided to at least one SSA provider. This provider should then make the data available to all other SSA providers.
- Government SSA providers should share conjunction warnings and other information.



Need for Global SSA Coordination



Global coordination is needed to **minimize the potential for spacecraft operators to receive conflicting information about potential conjunction events.**

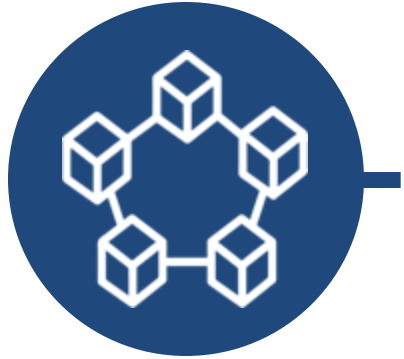


We seek to **avoid miscommunications** among nations.

We hope to lay **the foundation for future Space Traffic Coordination efforts**, which require consistent information on the likelihood and nature of potential conjunctions.



The “Global SSA Future” Vision



We envision a **global coordinated system of space situational awareness providers**, with a series of national or regional hubs providing information and services to spacecraft operators. **These centers will be supported by networks of international and commercial partnerships.**



Government services will be augmented by a **robust global commercial space situational awareness sector that provides value-added services** to support business intelligence and other advanced services.



The Department of Commerce is committed to maintaining an **open and transparent system** that enables global coordination with other global SSA providers.

“Global SSA Future” Implementation



**SSA
Data
Standards**



**SSA
Information
Sharing
Principles**



**Satellite
Operator
Engagement**



**International
Partnerships &
Communication**

Engage with OSC on TraCSS



TraCSS webpage

<https://www.space.commerce.gov/tracss>

News, videos, and information on engagements, including past and upcoming public listening sessions



Email

tracss.commerce@noaa.gov

Submit TraCSS-related questions, comments, & feedback



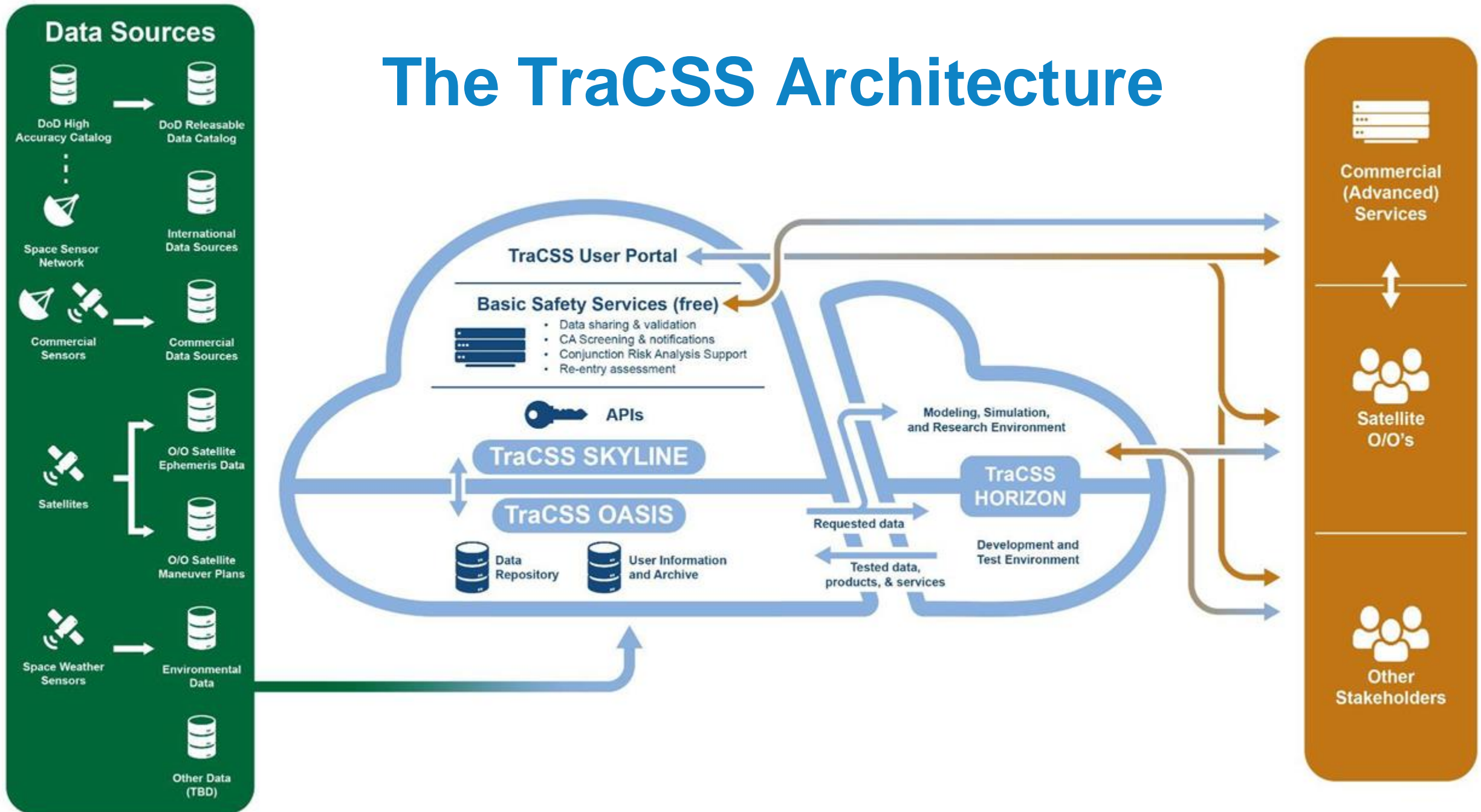
Newsletter

OSC Engagement Form

Subscribe to OSC outreach and engagement lists

Additional Material

The TraCSS Architecture





TracSS Development

System Integrator

Phase 1.0 rollout

Presentation Layer

DOD-DOC Alignment

Annex A
(Data Transfer)

Annex B (Roles & Responsibilities)

Working Groups

Industry Partnership

Stakeholder Listening Sessions

Consolidated Pathfinder

Improved O/O Pathfinder

Intl. Engagement

EUSST-TracSS Studies

SSA Global Vision

"Institution"

Legislative Proposal for TracSS Authorization

Increased staffing 4x

Hired Program Manager