



USA Staffing

USA Staffing Reporting & Analytics

Reporting and Analytics Workgroup Meeting

January 30, 2019

Created by the OPM Federal Staffing Center

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Agenda

Business Intelligence (BI) Tool Evaluation

Program Updates

- Cognos Performance Metrics

Modifications to Reports and Data Models

- Reports
- Data Models
- Staffing Administration
- Time to Hire

Cognos Tips



- New Time to Hire Reporting
- OPM Time to Hire Model
- Time to Hire Summary and Detail Reports

- **Open Demo and Q&A**

Business Intelligence (BI) Tool Evaluation

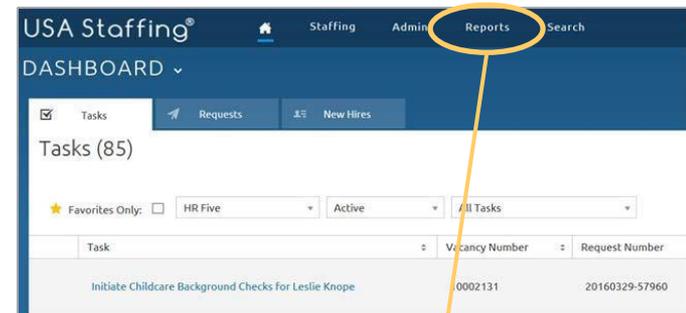


Cognos Analytics

USA Staffing currently uses Cognos Analytics, an IBM product, as our BI tool to provide standard reports and ad-hoc reporting capabilities to HR specialists and data analysts.

We also use Cognos Analytics as the structure for our Data Self-Service (DSS) interconnection.

Based on feedback from customer agencies, challenges in administering Cognos, and recent advances in BI tools in the market, **we are in the process of evaluating potential replacements for Cognos as our reporting tool.**



Recruitment Sources By Vacancy Report

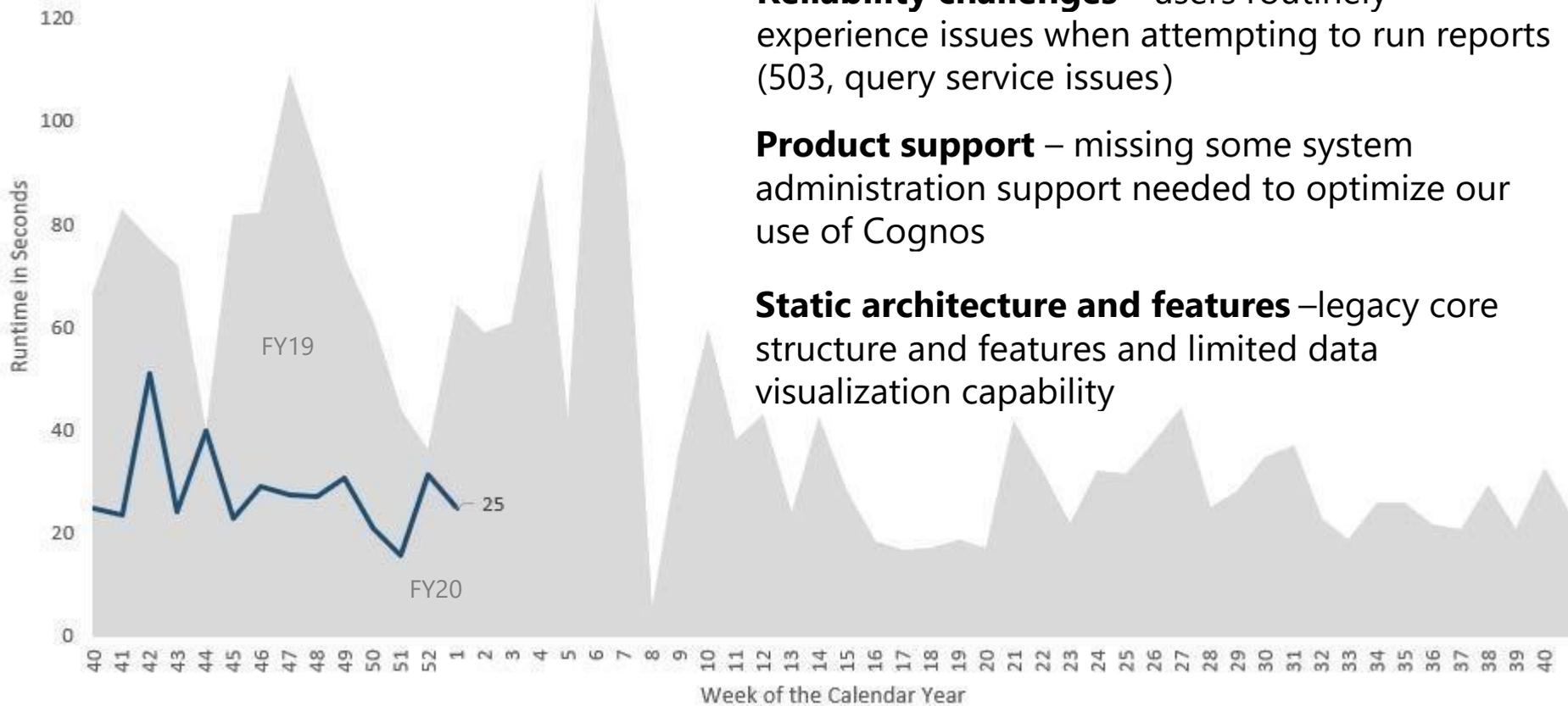
Staffing Organization	Staffing Office	Customer Name	Vacancy Number	Announcement Number	Open Date
ASMG Internal Release Testing	Matt's House	Clash of Clans - Fan Club	10015977	ST-10015977-17-TA	02/17/2017
			10051843	ST-10051843-18-TA	10/12/2017
Infinity Regression	Cleveland Staffing Office	Bourbon Distillery	10015514	DE-10015514-17-IO	02/14/2017
OPM Program	Program Office	Account Management Branch \	10021066	DE-10021066-17-TH	03/05/2017
			10021662	IMP-10021662-17-TH	03/06/2017



Current Cognos Experience

Performance issues – while some of the slow report speed that customers experience is

attributed to the USA Staffing data structure, the Cognos infrastructure is also a factor



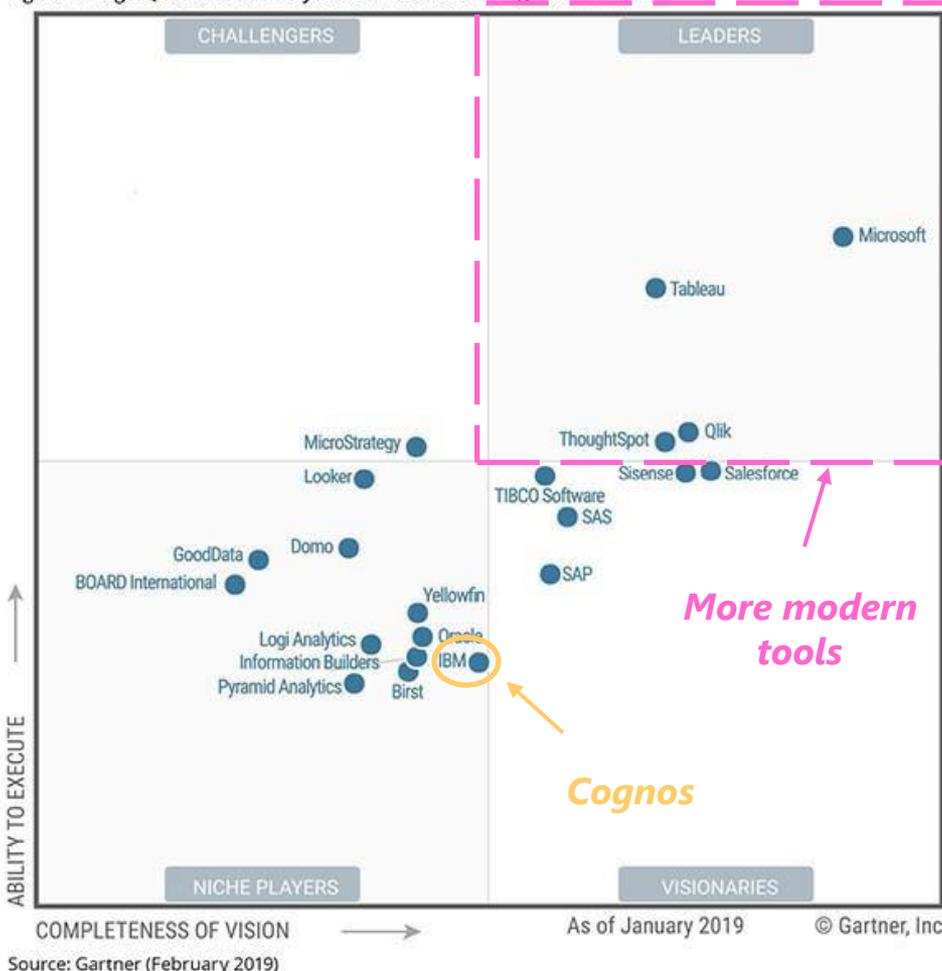
Reliability challenges – users routinely experience issues when attempting to run reports (503, query service issues)

Product support – missing some system administration support needed to optimize our use of Cognos

Static architecture and features – legacy core structure and features and limited data visualization capability

Average Successful Report Time by Week

Figure 1. Magic Quadrant for Analytics and Business Intelligence Platforms



Changing BI Tool Market

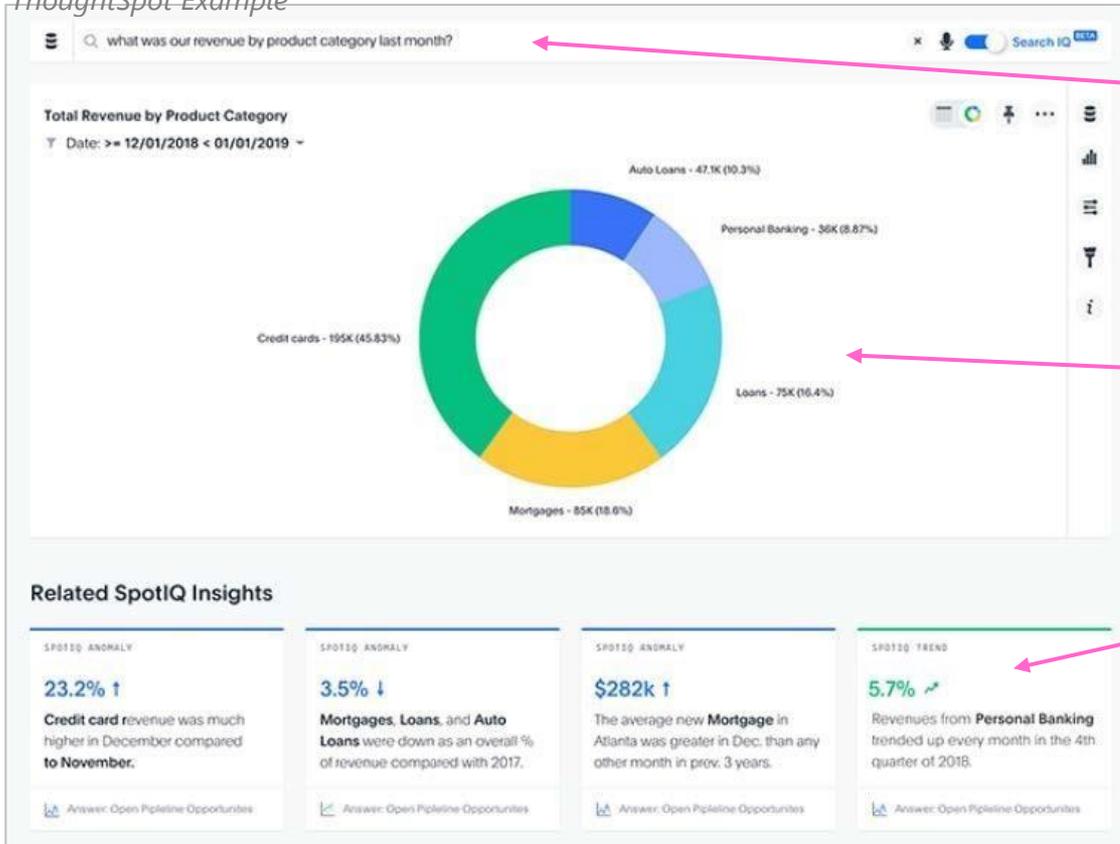
Cognos has been on the market for decades and was one of the first business intelligence tools.

In the past few years, several new products have been launched that offer **more modern features to meet current data demands.**



Modern BI

ThoughtSpot Example



Features

Data searching – ability for users to search for data and create results through a simple search UI

Data visualization – ability to embed visuals and for casual users to quickly create interactive visualizations

AI features – AI/ML engines to automatically do some analysis for users

A more modern platform will be **faster and more reliable**; it will also bring features that will make it **easier for users to access and use data** in their daily work



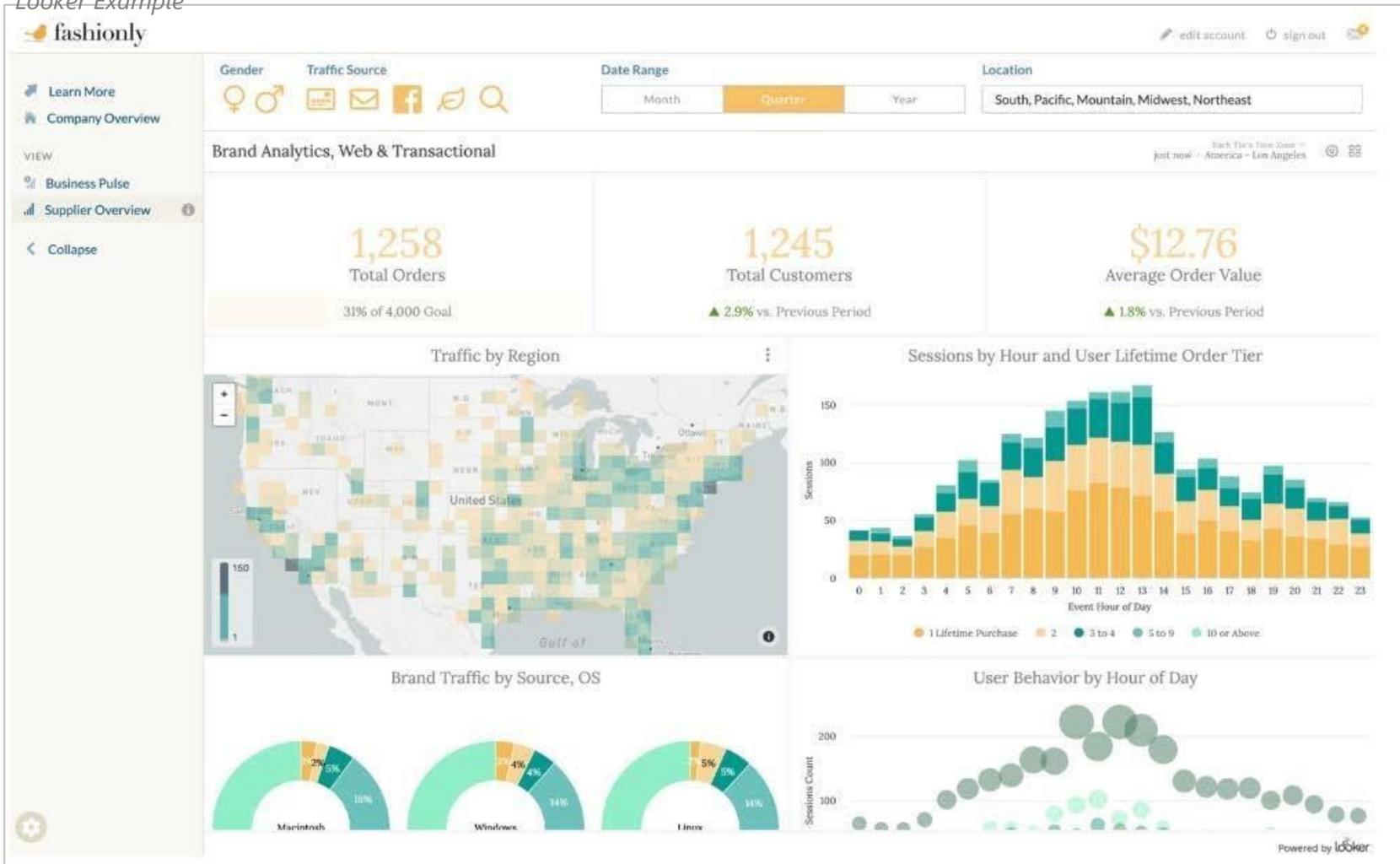
Performance and scalability – infrastructures designed for speed and high volume data



Embedded Analytics Example



Looker Example





Customer impact

Switching to a new Business Intelligence Tool will cause a significant customer impact due to the investments that have been made in Cognos

- **Current Cognos reports** – standard reports and agency-built custom reports would have to be re-built.
- **Data Self-Service Interconnections** – DSS interconnections would have to be re-developed (DSS is built off of a Cognos product).
- **Training and job aids** - Agencies have spend a significant amount of time and money learning how to use Cognos, including sending people to classes and creating agency-specific job aids.

USA Staffing will invest significant resources through our data teams to provide support to agencies through a transition to a new tool



BI Tool Evaluation Timeline

Oct-Nov

Market research

Initial demos by top BI tools with follow-up technical discussions to inform the development of formal requirements. Tools: PowerBI, Tableau, Qlik, MicroStrategy, Looker, SiSense, ThoughtSpot

Dec-Jan

Formalize Requirements

Finalize requirements for a formal request for proposals from the market

Jan-Feb

Request for Proposals

Receive responses to the RFP



Feb-May Technical Evaluation

Install high-performing tools in our data infrastructure and conduct rigorous performance and functional testing

Early FY2021

Begin

Transition

Work with agencies to begin moving reporting and DSS from Cognos to the new tool

(Cognos running concurrently)

Late FY2021

Complete

Transition

Complete the transition to a new tool and decommission Cognos

Agency Collaboration

This is a big change that can transform how HR users use data in their daily work; it will also take a great deal of effort to implement. **Regularly**



communicating on the status of the evaluation and getting your feedback is critical to the success of this project

13

- **Advisory Board Updates** – we will regularly update the advisory board, including providing demos of new potential tools.
- **Reporting and Analytics Workgroup Meetings** – we will also update the workgroup regularly and use this group as a primary source for requirements
- **Technical Evaluation and Transition Group** – we will establish a small group of agency experts to serve as SMEs as we evaluate new BI tools



and to consult on how to manage the transition from the agency perspective

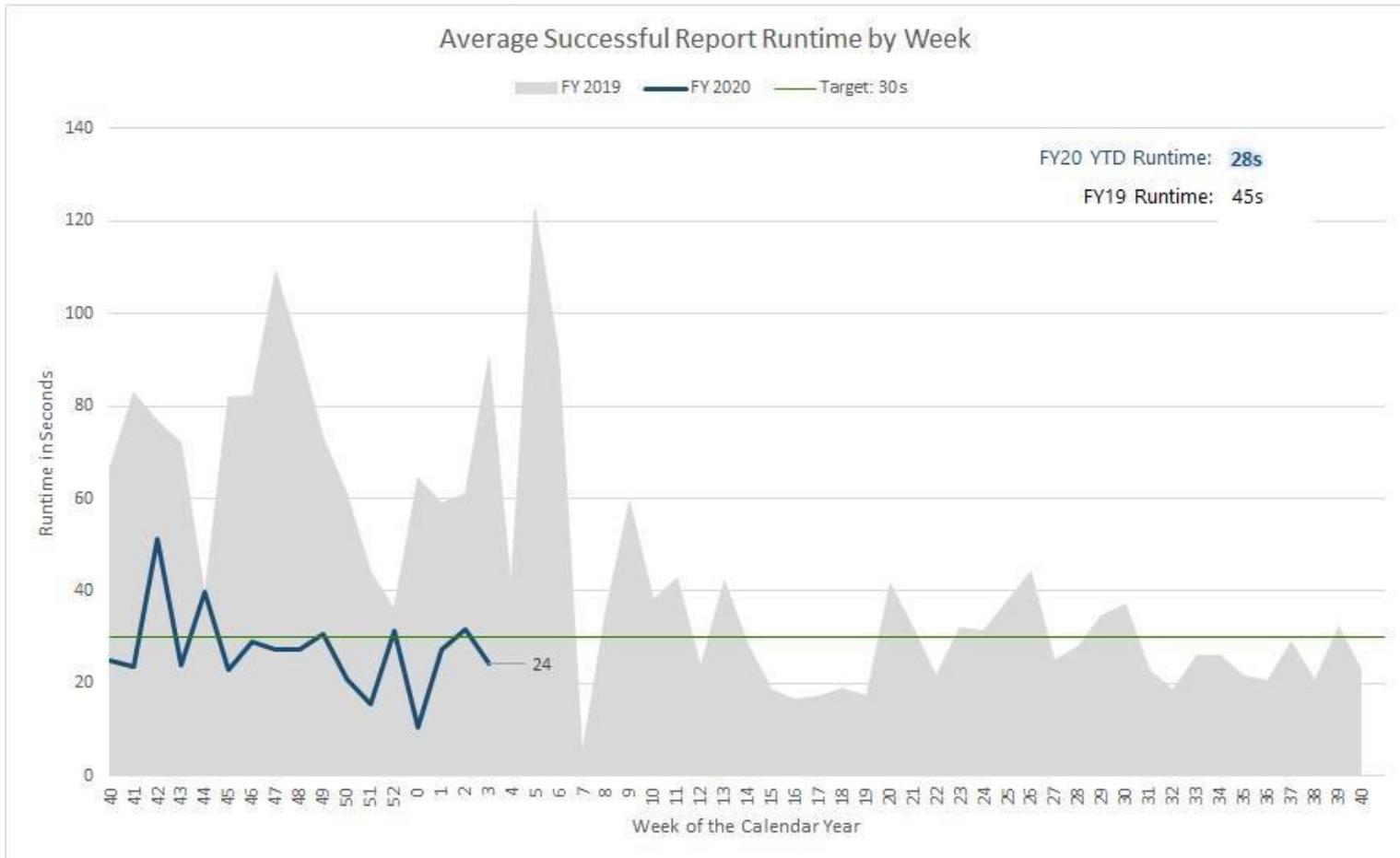
- **Data Self-Service (DSS) Feedback and Requirements** – we are in the process of gathering feedback from DSS users to determine the best way forward in meeting customer needs

Cognos Performance Metrics



Report Runtime

Goal: Cognos Report Runtime <1 min



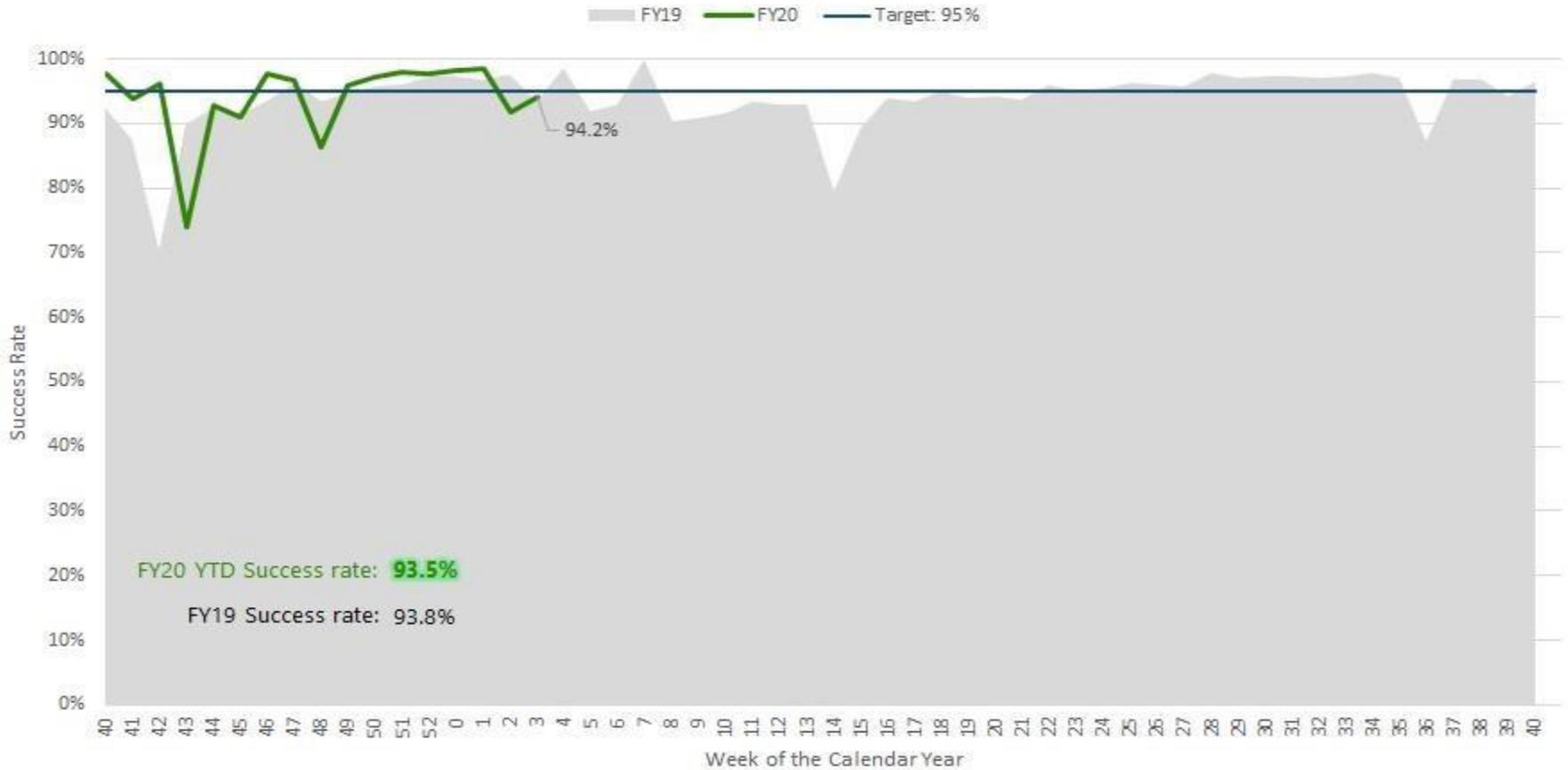


Report Run Success Rate

Goal: Cognos Report Success Rate $\geq 95\%$



Percentage of Successful Report Runs by Week





Modifications to Reports and Data Models

Sprint 30 deployed to Production on January 8th

Sprint 31 deployed to Production on January 22nd

Sprint 32 will be deployed to Production on February 5th



Reports

New/Modified Reports User License Dashboard Report - **deployed January 22nd**

The User License Dashboard report was modified. The report displays a summary of Paid and Unpaid accounts by organization. The report was modified to filter out retired users and to add a count of HR users with access to applicant flow data.

Location: Team Content > USA Staffing Packages and Folders > Staffing Analytics > User Licenses

Staffing Administration

Data Model Changes

Documents - **deployed January 22nd**



A new query subject and associated query items were created in the Staffing Administration namespace in the Position Description Library folder to allow reporting on documents related to position descriptions.



- [Position Description Library].[Documents].[Document Is Visible to the Hiring Manager]
- [Position Description Library].[Documents].[Document Name]
- [Position Description Library].[Documents].[Document Submission Date/Time]
- [Position Description Library].[Documents].[Document Submitted By]
- [Position Description Library].[Documents].[Document Type]

Position Description Customers - deployed January 22nd

A new query subject and associated query items were created in the Staffing Administration namespace in the Position Description Customers folder to allow reporting on the name of a customer that uses or has access to a position description.

- [Position Description Library].[Position Description Customers].[Position Description Customer Name]



Staffing Administration

Data Model Changes Position Description Tags - **deployed January 22nd**

A new query subject and associated query items were created in the Staffing Administration namespace in the Position Description Tags folder to allow reporting on reporting on tags related to position descriptions.

- [Position Description Library].[Position Description Tags].[Position Description Tag Level]
- [Position Description Library].[Position Description Tags].[Position Description Tag Name]
- [Position Description Library].[Position Description Tags].[Position Description Tag Owning Office]
- [Position Description Library].[Position Description Tags].[Position Description Tag Type]



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Time to Hire

Data Model Changes

Vacancy Position Descriptions – deployed January 8th

Added a query subject and associated query items to the Time to Hire namespace and the Vacancy Information folder to enable reporting on position descriptions and rating combinations.

[Time to Hire].[Vacancy Position Descriptions].[Vacancy Grade]

- [Time to Hire].[Vacancy Position Descriptions].[Vacancy Pay Plan]
- [Time to Hire].[Vacancy Position Descriptions].[Vacancy Pay Plan Description]
- [Time to Hire].[Vacancy Position Descriptions].[Vacancy Position Description Number]
- [Time to Hire].[Vacancy Position Descriptions].[Vacancy Position Description Title]
- [Time to Hire].[Vacancy Position Descriptions].[Vacancy Series]
- [Time to Hire].[Vacancy Position Descriptions].[Vacancy Series Title]



- [Time to Hire].[Vacancy Position Descriptions].[Vacancy Specialty]

Time to Hire

Data Model Changes

Customers – deployed January 8th

Added a query subject and associated query items to the Time to Hire namespace and the Organizational Information folder to enable reporting on customer attributes.

- [Time to Hire].[Customers].[Customer Agency Code]
- [Time to Hire].[Customers].[Customer Agency Name]
- [Time to Hire].[Customers].[Customer External Name]
- [Time to Hire].[Customers].[Customer Name]



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Time to Hire

Data Model Changes

Time to Hire Metrics Dates – deployed on January 22nd

A new query item was created in the Time to Hire namespace in the Metrics folder and the Time to Hire Metrics Dates query subject for future OPM mandated time to hire reporting.

- [Time to Hire].[Time to Hire Metrics Dates].[Tentative Offer Accepted Date]

Time to Hire Days – deployed on January 22nd

New query items were created in the Time to Hire namespace in the Metrics folder and the Time to Hire Days query subject to enhance reporting on time spent in various phases in the hiring process.

- [Time to Hire].[Time to Hire Days].[Certificate Returned to Tentative Offer Sent]



[Time to Hire].[Time to Hire Days].[Hiring Need Validated to Tentative Offer Accepted]

Time to Hire

Data Model Changes

Time to Hire Milestone Dates – deployed on January 22nd

New query items were created in the Time to Hire namespace in the Milestone Dates folder and the Time to Hire Milestone Dates query subject to allow users to slice and dice around the Tentative Offer Accepted Date.

- [Time to Hire].[Time to Hire Milestone Dates].[Tentative Offer Accepted Calendar Month] •
[Time to Hire].[Time to Hire Milestone Dates].[Tentative Offer Accepted Calendar Month Number]
- [Time to Hire].[Time to Hire Milestone Dates].[Tentative Offer Accepted Calendar Week]
- [Time to Hire].[Time to Hire Milestone Dates].[Tentative Offer Accepted Calendar Year]
- [Time to Hire].[Time to Hire Milestone Dates].[Tentative Offer Accepted Date]



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- [Time to Hire].[Time to Hire Milestone Dates].[Tentative Offer Accepted Fiscal Month Number]
- [Time to Hire].[Time to Hire Milestone Dates].[Tentative Offer Accepted Fiscal Quarter]
- [Time to Hire].[Time to Hire Milestone Dates].[Tentative Offer Accepted Fiscal Year]

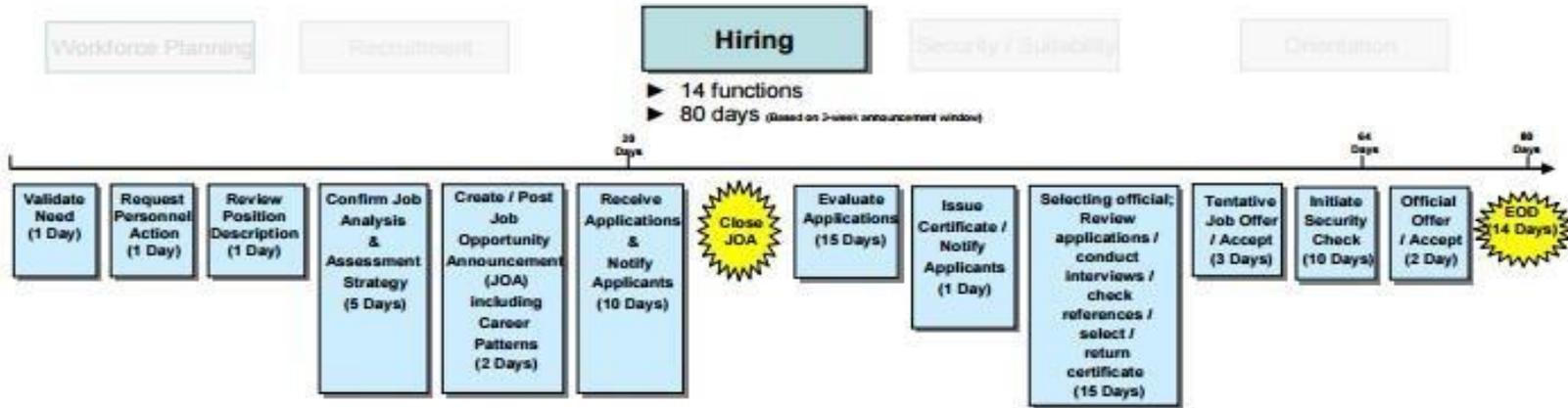
Cognos Tips

New Time to Hire Reporting



OPM Time to Hire Model

The USA Staffing Time to Hire reporting capability is based on the functions identified in the Hiring Process Roadmap (80-day model)



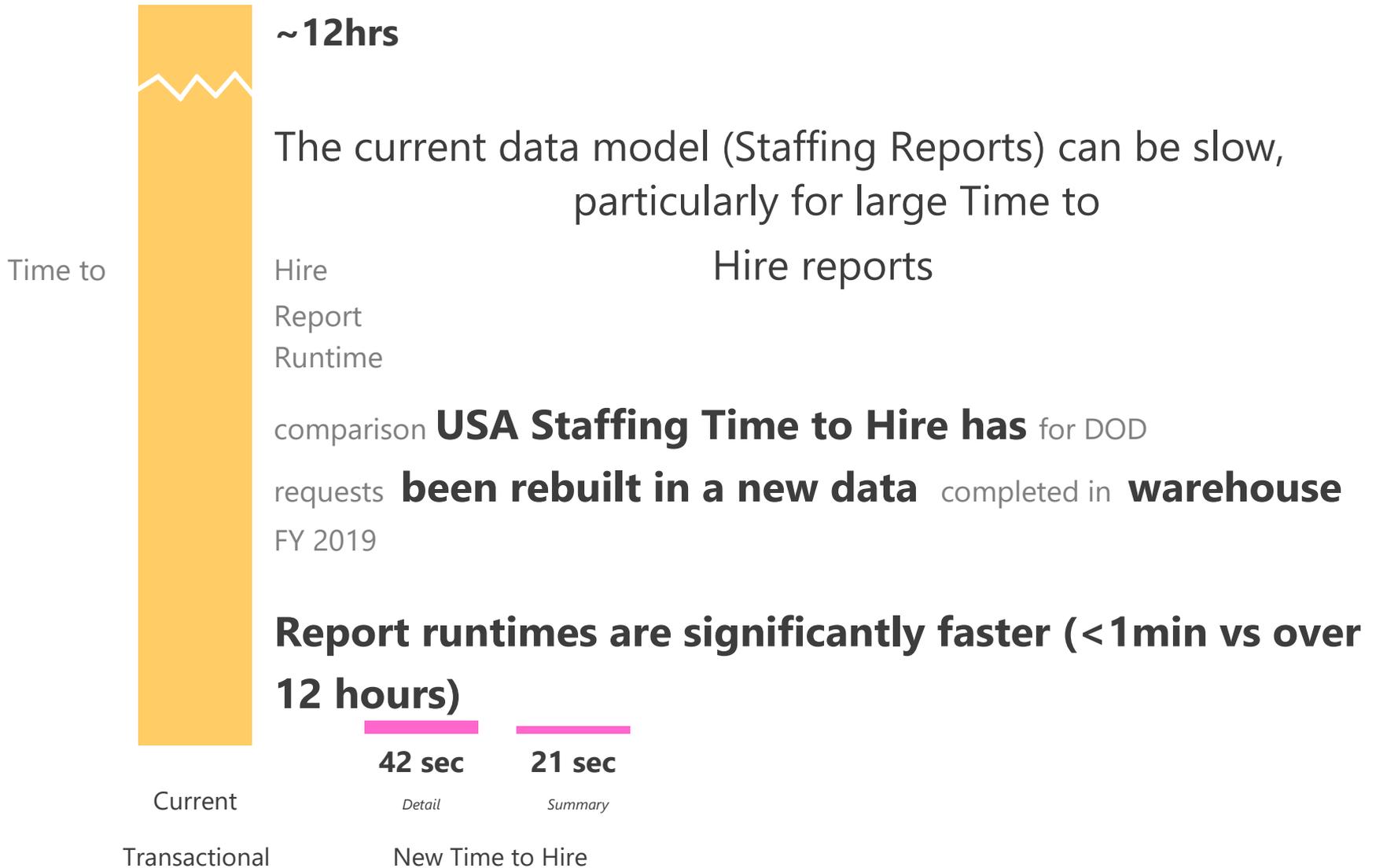
Overall Time to Hire The number of days from when the manager validates the hiring need against **to** agency workforce, staffing, or recruitment plans (**Hiring Need Validated Date**) to the date the new hire enters on duty (**New Hire Actual Start Date**)





Hiring Phases Agencies can monitor hiring phases and milestones through **workflows and and**
Milestones tasks to identify potential bottlenecks in the process

Faster, More Reliable Data Source





Model

Data Warehouse

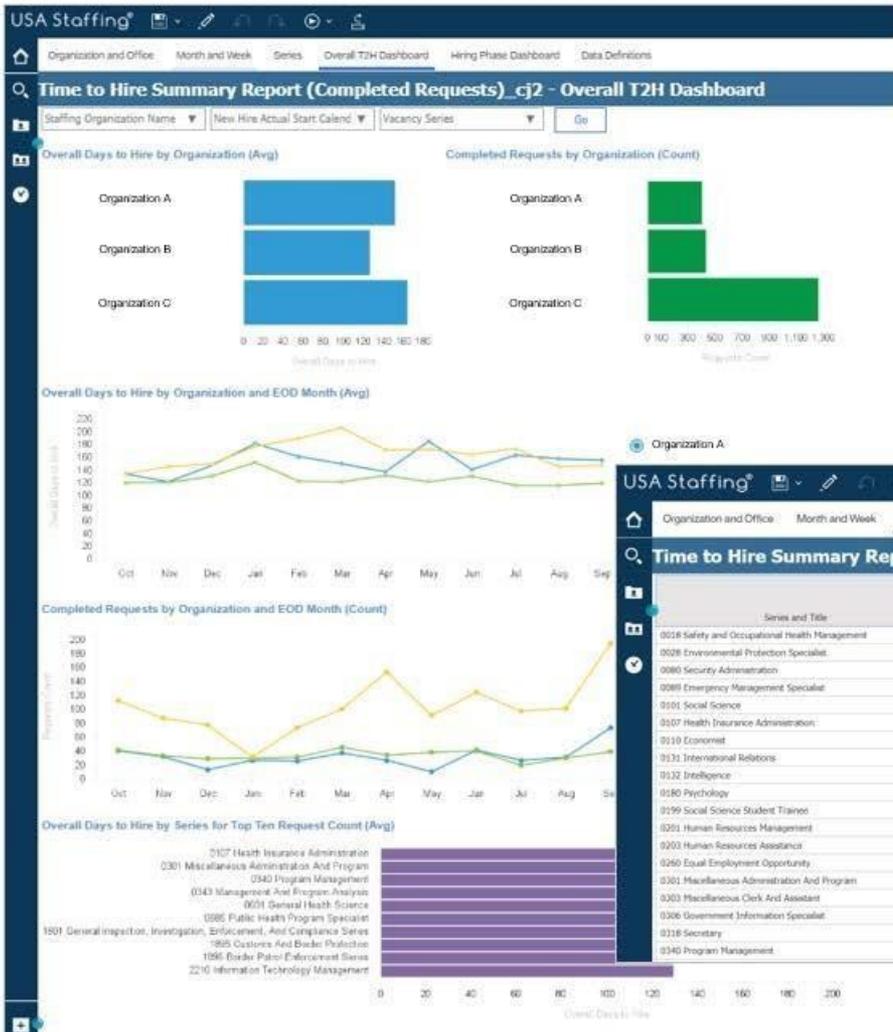


- ▼ Time to Hire
 - ▼ Presentation View
 - ▼ Time to Hire
 - ▼ Metrics
 - ▼ Time to Hire Days
 - Announcement Close to Certificate Issued
 - Announcement Close to Hire
 - Announcement Open to Close
 - Background Investigation and Security Clearance
 - Certificate Audited to Tentative Offer
 - Certificate Issued to Certificate Returned
 - Certificate Returned to Certificate Audited
 - Hiring Need Validated to Request Approval
 - JOA Review Returned to Announcement Open
 - JOA Review Sent to JOA Review Returned
 - Official Offer to Entry on Duty
 - Overall Days to Hire (Hiring Need Validated Date)
 - Overall Days to Hire (Request Approval Date)
 - Request Approval to Announcement Open
 - Request Approval to JOA Review Sent
 - Tentative Offer to Official Offer
 - ▶ Time to Hire Metrics Dates
 - ▶ Milestone Dates
 - ▶ Organizational Information
 - ▶ Request Information
 - ▶ Vacancy Information

- Updated nightly
- Only Completed Requests (New Hire Arrived on Duty task completed)
- Includes New Vacancy and Additional Selection Request Types*
- 16 most common time to hire metrics based on 80-day hiring model (min/max)
- Summary and request/vacancy-level
- Organization, office, PP, Series
- Dates associated with metrics

*Including Additional Selection Requests may result in negative metric values as they pull announcement, certificate, and review dates from the vacancy

Standardized, Pre-Calculated Metrics



Dashboards and data tables of time to hire data by organization, office, series, and hiring process milestone

Series and Title	Request Count	Overall Days to Hire (Avg)	Request Approval to JOA Review Sent	JOA Review Sent to JOA Review Returned	JOA Review Returned to Announcement Open	Announcement Open to Close	Announcement Close to Certificate Issued	Certificate Issued to Certificate Returned	Certificate Returned to Certificate Applied	Certificate Applied to Tentative Offer Sent	Tentative Offer Sent to Official Offer Sent	Official Offer Sent to Entry on Duty
0018 Safety and Occupational Health Management	6	225.2	0.5	4.2	2.8	7.3	11.5	30.3	22.2			23.5
0028 Environmental Protection Specialist	1	105.0	1.0	1.0	3.0	4.0	7.0	66.0	0.0	0.0	8.0	6.0
0080 Security Administration	14	180.0	3.3	2.9	3.3	9.9	27.6	54.2	17.4	-22.2	75.3	17.5
0089 Emergency Management Specialist	4	180.2	4.8	2.3	2.0	9.5	45.8	36.8	30.0	37.0	5.0	37.5
0101 Social Science	20	160.9	3.0	2.2	5.4	38.8	29.4	60.8	32.3	-119.6	13.7	-24.7
0107 Health Insurance Administration	182	121.3	3.0	3.0	2.0	34.8	18.0	39.6	13.3	-39.1	14.6	16.3
0110 Economist	13	142.8	4.5	12.4	-8.4	17.6	3.8	50.4	-45.1	-107.7	21.9	34.6
0131 International Relations	2	182.5	3.5	11.0	3.5	6.5	27.0	48.0	7.5	0.0	17.0	9.0
0132 Intelligence	26	197.3	2.5	1.7	5.2	6.3	26.2	54.2	27.0	-14.7	53.0	19.2
0190 Psychology	3	178.0	3.3	2.0	4.0	14.0	26.7	34.7	62.0	-49.0	85.0	23.7
0199 Social Science Student Trainee	3	80.3	0.0	29.0	-67.0	0.3	18.0	94.3	63.0	-51.0	11.5	5.0
0201 Human Resources Management	29	183.7	4.4	27.1	-22.6	14.0	20.0	50.2	15.9	-24.9	36.4	22.1
0203 Human Resources Assistance	1	130.0				6.0	24.0					13.0
0260 Equal Employment Opportunity	6	271.2	17.2	26.0	5.8	13.5	27.8	28.5	16.8	-53.0	53.0	11.6
0301 Miscellaneous Administration And Program	245	148.4	5.7	5.6	0.7	8.4	18.0	49.4	11.1	-4.2	30.9	14.4
0303 Miscellaneous Clerk And Assistant	19	207.6	8.3	2.3	4.7	5.4	10.2	70.5	-13.2	47.9	64.0	14.3
0306 Government Information Specialist	5	850.2	6.4	0.6	6.0	7.6	36.4	19.4	40.0	-48.3	7.7	6.8
0318 Secretary	3	145.7	1.0	2.0	2.7	5.8	13.3	37.0	97.5	-176.0	118.0	17.3
0340 Program Management	65	159.0	4.8	7.5	0.0	7.4	17.2	62.4	25.6	-19.8	25.2	8.9



In Development

Attributes

- Announcement
- Announcement Location
- Appointment Type
- Hiring Path
- Work Schedule
- New Hire

Structure

- Include all selections
- Add Onboard New Hire Request Type

Our two-week sprint schedule allows us to add new Time to Hire features quickly



Open Demo and Q&A



Resources and Contacts

IBM Cognos Analytics User Guide

The official IBM user guide for Reporting via Cognos Analytics:

https://www.ibm.com/support/knowledgecenter/SSEP7J_11.0.0/com.ibm.swg.ba.cognos.ug_cr_rptstd.doc/ug_cr_rptstd.pdf?view=kc

USA Staffing Resource Center

Under the Reports and Analytics section, you'll find presentations from previous workgroup sessions and other resources:

[https://help.usastaffing.gov/ResourceCenter/index.php/USA Staffing Upgrade Resource Center](https://help.usastaffing.gov/ResourceCenter/index.php/USA_Staffing_Upgrade_Resource_Center)

Cognos Report Author Training Sessions



An overview of USA Staffing data with practical exercises in running standard reports and developing custom reports in Cognos. Contact your Account Manager if you are interested in scheduling a session for the report authors in your organization

Need Help?

If you are experiencing issues accessing Cognos or need help to create or troubleshoot a report, submit a HelpDesk ticket through USA Staffing. If you are unable to submit a HelpDesk ticket, please contact us at

USAStaffingData@opm.gov