



# CUSTOMER INTELLIGENCE

## FOR THE FEDERAL GOVERNMENT

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## EXECUTIVE SUMMARY

Federal government agencies are actively seeking innovative ways to improve the experience of their users. They want to increase the visibility of relevant content, encourage information sharing within communities of interest, measure the content that is generating the most value, and identify users who are consuming content in unexpected ways.

Syntasa has created enterprise-grade commercial technology to help consumer-facing brands with large amounts of behavioral data from websites, apps, and devices to better understand and predict their customers behavior. Similar to leading consumer platforms such as Netflix and Amazon, the Syntasa Platform enables federal government agencies to leverage their behavioral data, build a deeper understanding of their customer behavior, and improve their customer experience.

## THE VISION

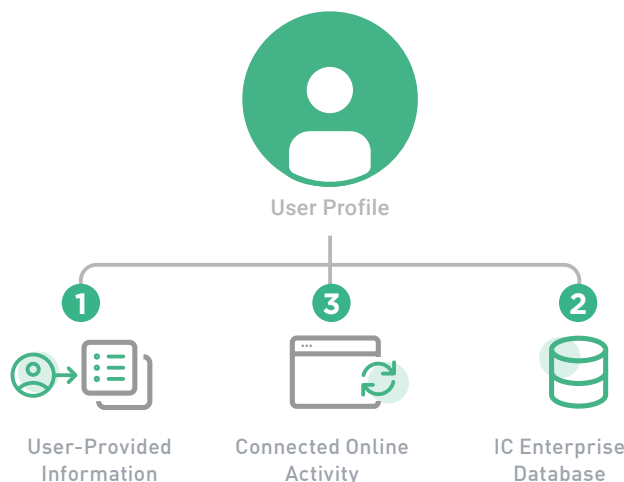
The Intelligence Community (IC) is looking to ways to improve access to their intelligence products, services, and solutions. They want to help analysts and operators discover previously unknown and valuable intelligence products, minimize the time they spend searching for the information they need, and proactively identify and present capabilities and products they would not have found otherwise.

These agencies ultimately want to provide their users with tailored content to increase consumption and engagement. A critically important part of this vision is a recommendation engine for data, products, tools, and people that is personalized for each individual user.

The most relevant recommendations depend on a centralized and tailored digital platform that captures three types of data for each user, including:

1. Profile data that is available in agency directories, and which can be supplemented via surveys or shared from other agencies
2. Activity data collected from Piwik (now Matomo), social media tags, bookmarks, saved searches, subscriptions, groups, and collaboration sites
3. Enterprise data about regions, projects, and access levels

In addition to providing personalized user experiences to improve discovery and consumption, this centralized digital platform will facilitate performance measurements, inform investment and funding strategies, and achieve both economic and time efficiencies, all while maximizing mission impact.



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### Tailored User Experience

Enhances the user interactions and consumption of products and solutions leading to savings in time and attention, as well as more impactful intelligence products

### Recommender

Pushes relevant capabilities and products to users based on user profile and metrics which enables the users to discover previously unknown solutions or products.

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### Performance Measurement

Enables a holistic view and measure of how and when intelligence products and capabilities are consumed and utilized, in order to identify support gaps.

### Informed Investment Strategy

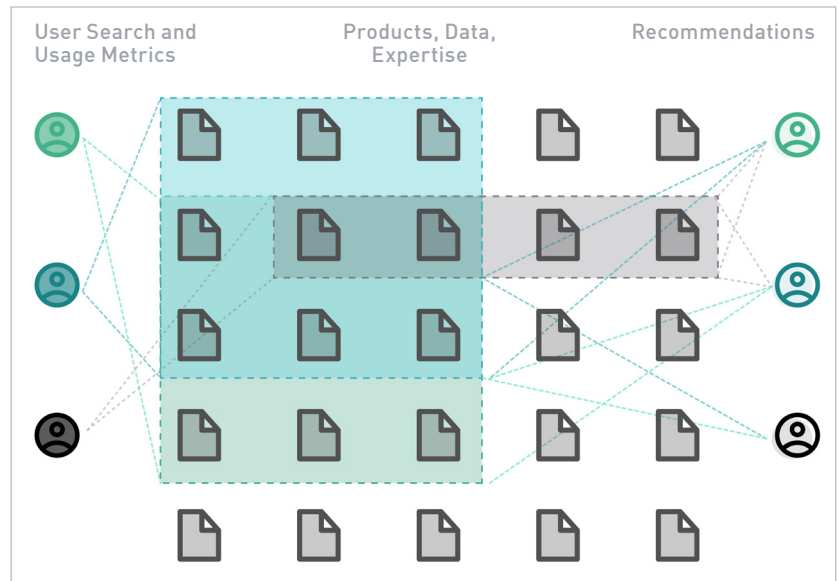
Insight into the utilization of IC tools and products can help inform investment strategies and funding priorities.

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## THE SOLUTION

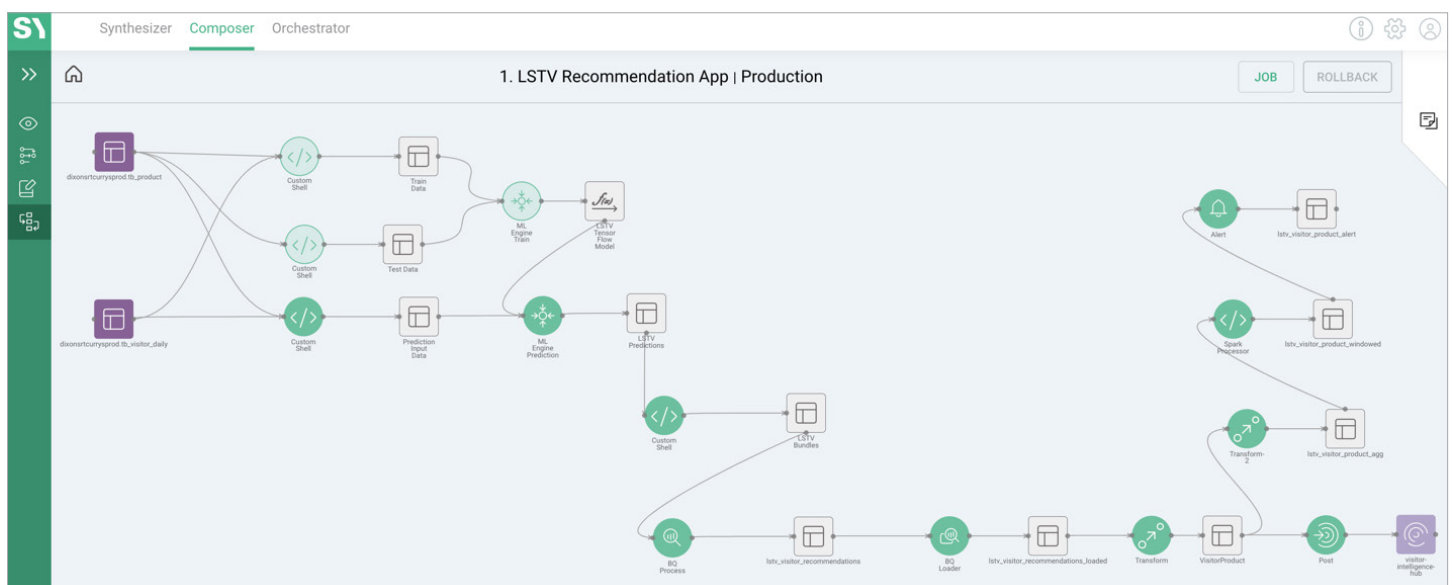
Syntasa has built a software platform that ingests massive volumes of behavioral data from any source, reconciles that data at the individual level with an ID Graph, and combines it with internal and offline data sources into a unified customer data store.

This unified customer data enables federal government agencies to perform more accurate analytics to generate more effective insights. These reports and visualizations can be performed within the Syntasa product, or with another preferred analytics tool (e.g., Tableau). Our real-time reporting is designed to visualize web and mobile events as they occur. Events can be received as small batches or in streaming format and processed as soon as they are available. Syntasa can also create custom aggregations to simplify the work that analytics tools must do. These aggregations speed up reporting and visualizations and reduce the cost of cloud computing resources.



Better analytics and insights help people make better decisions. The traditional approach is to capture those decisions as 'business rules' used to automate processes and systems or other static data such as demographics or profile information to segment users. Syntasa has developed technology that applies state-of-the-art Machine Learning (ML) algorithms to behavioral and contextual data to generate a) personalized predictions for the most relevant content, b) other similar users, c) additional recommended content, d) best way to re-engage inactive users, e) system usage, and f) user outlier behavior. Our modeling product is designed to help analysts intuitively understand both the complex patterns inherent in the data as well as the effectiveness of their behavioral models. Once these models are in production, they are refined and updated using the most recent user actions, in order to account for any changes in user behavior.

The most valuable (as well as most challenging) part of the journey in building intelligent customer experiences is taking meaningful action. All your work with data and ML is of little use if you are not able to put your predictions to work in your production environment. Syntasa activates your intelligent customer experiences on websites, apps, devices, and other systems like email, mobile messaging, audience management, and CRM.



## RECOMMENDED USE CASES

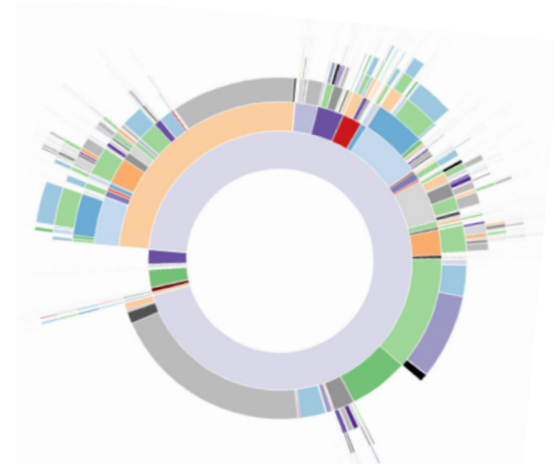
Based on our experiences within the intelligence community, we recommend the following as relevant use cases for our Customer Intelligence solution.

### Improve visibility of relevant content

Instead of sifting through vast volumes of irrelevant or repetitive reports, analysts and mission specialists will easily find the most relevant reports by receiving personalized recommendations based on their past behaviors, others with similar behavioral profiles, and reports that are typically consumed together. For example, Dixons Carphone is using Syntasa to generate personalized product recommendations, and have tripled their add-to-basket rate.

### Encourage information sharing and expand communities of interest

Users can see other users with similar interests and identify additional content they might not have been aware of. For example, analysts and mission specialists will receive ML-driven recommendations from other organizations, divisions, groups, areas, and individuals that produce or consume similar intelligence products. Using lookalike analysis, ML algorithms can also identify additional users that “look like” the organizations, divisions, groups, areas, and individuals that consume and produce similar content.



CUSTOMER USE CASE  
Analyzing Customer Journeys

Customer Intelligence Hub- Journey Table						
Churn	Journey	Email Response	IVR Usage	Shopper Behaviour	Web Usage	Visitors
Very Low	web 3. Product View	Very Low	Very Low	Disengaged	Browsed	2
Medium	web 3. Product View	Low	High	Disengaged	Browsed	2
Very Low	web 3. Product View	Low	Medium	Engaged Shoppers	Product View	2
Medium	web 3. Product View > web 3. Product View > web 2. Browse	High	Low	Disengaged	Product View	2
No data	web 3. Product View > web 3. Product View > web 3. Product View	Very Low	High	Disengaged	Product View	2
Very Low	web 3. Product View > web 3. Product View > web 3. Product View	Medium	Low	Disengaged	Bounced	2
Medium	web 2. Browse	Low	Very Low	Disengaged	Product View	2
Very Low	web 4. Cart Add	Low	Medium	Disengaged	Browsed	2
Low	web 4. Cart Add	Low	Low	Disengaged	Product View	2
Low	web 4. Cart Add	Medium	Very Low	Disengaged	Product View	2
Low	web 3. Product View	Very Low	Very Low	Engaged Shoppers	Product View	2
Medium	web 3. Product View	Very Low	No data	Engaged Shoppers	Browsed	2
Medium	web 3. Product View	Very Low	Low	Disengaged	Browsed	2
Very Low	web 3. Product View	Very Low	No data	Disengaged	Product View	2

Syntasa Customer Intelligence Hub

### Identify users that are likely to stop consuming or producing content

ML algorithms can identify users exhibiting behavior which typically leads to inactivity. Sony is using these algorithms to predict which users of their PlayStation Vue product are likely to stop using their service and potentially cancel their subscription. And RS Components actively targets these customers with emails that include relevant product recommendations to encourage them to remain active.

## Value Chain and Reverse Inheritance Analysis

Management can gain valuable insight into the consumption and production of intelligence products across the community, and focus resources in those areas where value is highest. This same technique can also be used to identify those intelligence products that require improvements. In addition, Syntasa is able to provide a behavioral dossier on individual consumers and producers of intelligence products, such as analysis of content by NIPF topics and activities.

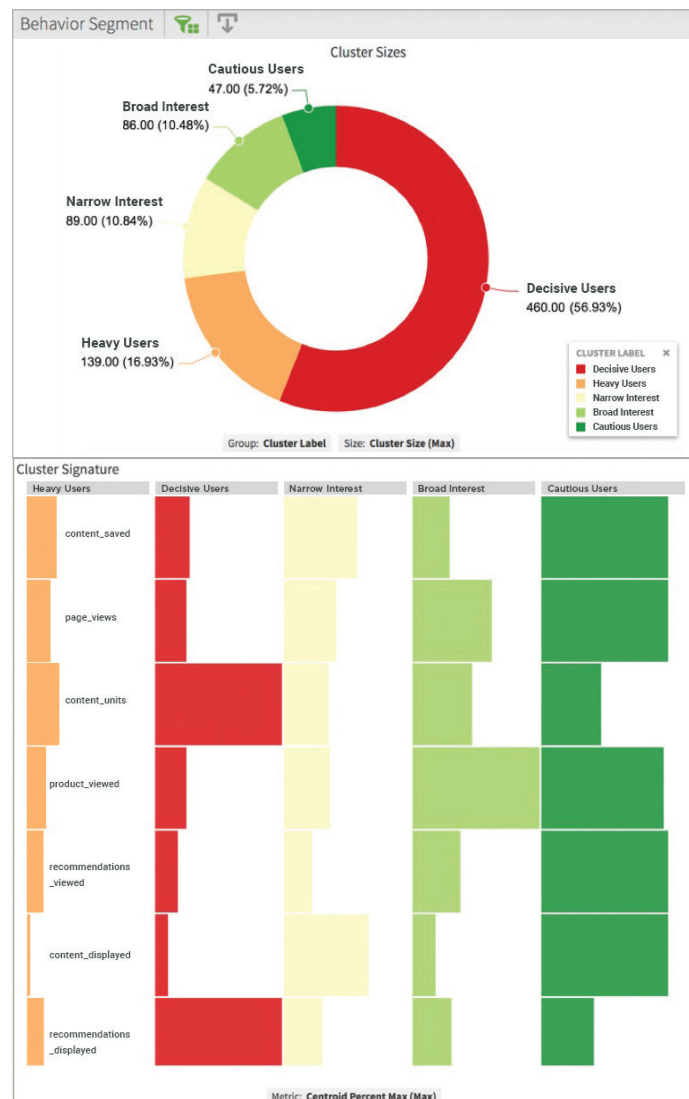
## Management can gain additional insight into the behavior of those who have access to sensitive information or special authorities

The Federal Government is able to gain visibility and insight to confirm users that access information within the normal parameters for their responsibilities, and identify whose behavior falls outside of those boundaries.

Furthermore, algorithms can monitor system administrators' privileged activity and detect anomalies by comparing real-time privileged account activity to norms for historical behavior. Lenovo is using similar techniques with Syntasa to identify fraudulent orders on their ecommerce platform.

## Determine how frequently and robustly these tools are used

Leverage visualizations to better understand how groups use IT capabilities, including the capability to dive deep into segmented user groups and chart individual users.



## THE SYNTASA DIFFERENCE

The Syntasa platform is built to leverage the native services within cloud-based big data platforms. Unlike traditional relational technologies that have limitations on the amount of data that can be analyzed at a given time and carry a very high cost of maintenance, Syntasa uses the elastic resources of cloud platforms like C2S and GovCloud to process massive volumes of data extremely quickly. Additionally, Syntasa leverages the latest developments in open source technologies, such as R, Apache Spark, Kubernetes, and Kafka.

Syntasa has extensive experience with behavioral data from websites, apps, and devices – in both classified and commercial environments. We have partnered with several federal government agencies to deploy Syntasa (in both classified and unclassified environments) to improve the visibility of relevant content, gain awareness into user activities, and provide behavioral predictions. Our solution is designed to harness streaming data from multiple sources in order to provide immediate and actionable information to decision makers.

Our solution is proven within the IC space and our team has a deep understanding of the unique operation considerations involved. These differentiators enable Syntasa to deliver a real-time, predictive capability that accommodates and integrates massive volumes of a large variety of data at an affordable cost and with limited risk.