



Case Study tust-hub

Protecting personal data with graphs



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Keeping personal info private – with the power of graphs

Why trust-hub Ltd, a British innovator, switched to yFiles for visualization

Data management measures are the bedrock of business today. Simply put, they make data usable – while upholding security standards and privacy regulations. So, what’s keeping companies from incorporating efficient, reliable data management into their business processes?

A British software company called trust-hub Ltd has distilled the challenge down to a single requirement: Companies need to model all the “players” involved in processing personal data (people, data, processes, hardware, software, locations...) as well as all the relationships between them. Will Parton, trust-hub’s CTO, gets even more specific: “We identified this as a graph. One that must be visualized in an approachable way, so that a non-specialized audience can easily grasp it. Hence we needed a graph visualization package.”

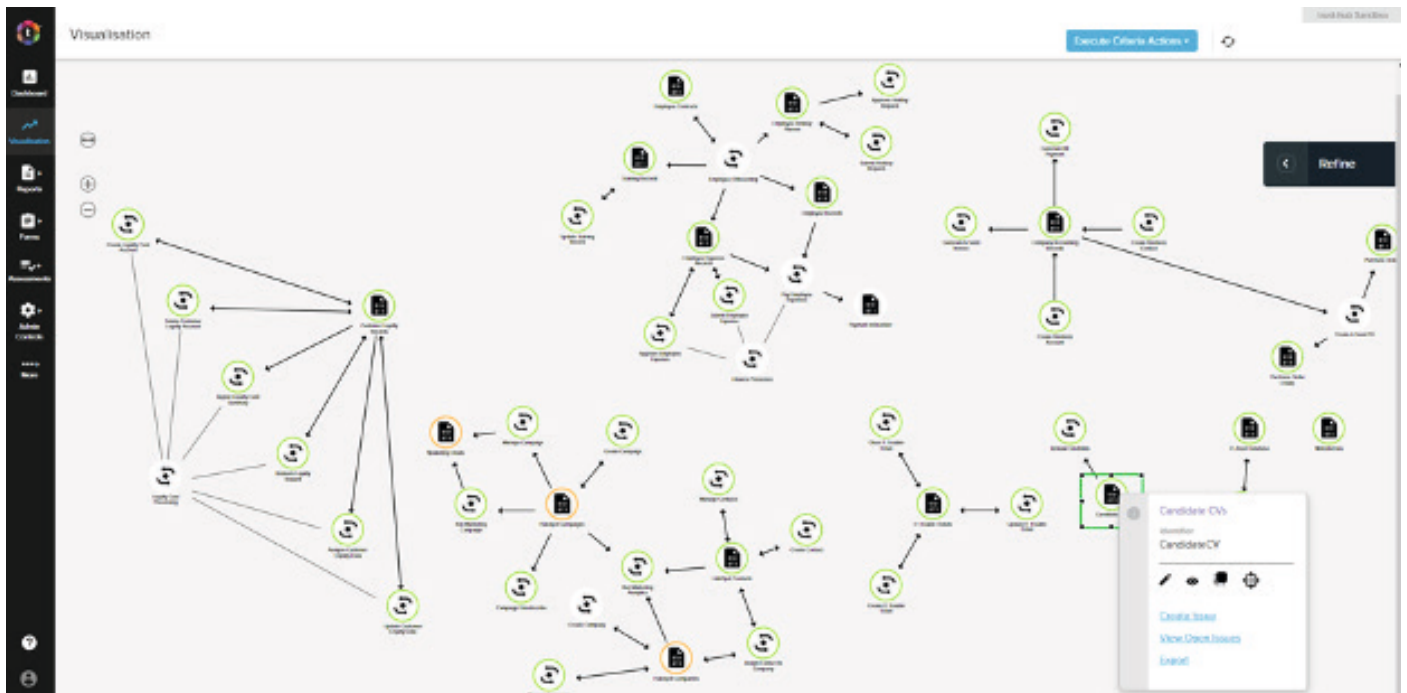


Industry Software Development
Headquarters Reading, England
Headcount +50

trust-hub’s mission is to power the safe and compliant use of personal data.

Discover more at trust-hub.com

Parton also shares that trust-hub used a competing product for about two years before deciding to seek a better alternative. What made yFiles stand out? Tremendous flexibility, for one thing. yFiles lets developers customize all the aspects of a great graph visualization: loading the data, analyzing and automatically laying it out, as well as using bespoke element designs. yFiles also makes it easy to create the user interactions that fit a specific use case – making for an ideal user experience.



Privacy Lens by trust hub

Needs & objectives

Needs analysis

- Model all entities involved in management of personal data
- Depict all relationships between those entities
- Make complex relational data accessible to non-specialist users

Objectives

- Use advanced visualizations for a superior user experience
- Make information directly and clearly accessible in customized diagram visualizations
- Build upon a proven solution with a more flexible, scalable visualization library



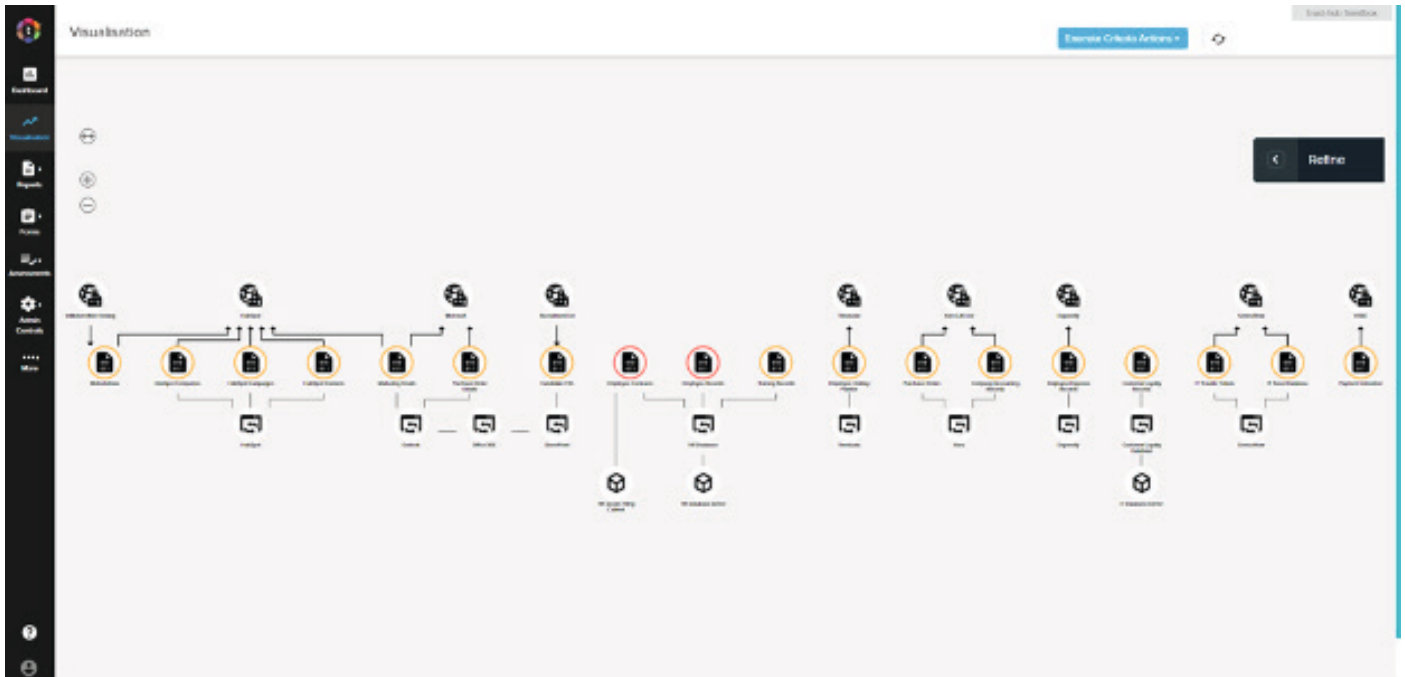
“The [relationship graph] must be visualized in an approachable way, so that a non-specialized audience can easily grasp it.

— Will Parton, CTO, trust-hub Ltd

yFiles – royalty-free and perpetual valid

trust-hub Ltd chose the yWorks diagramming SDK for its flexibility. Another plus, according to Parton, was the yWorks commercial model. yFiles is offered as a royalty-free, perpetual license – and license cost does not increase with sales numbers, so scaling up is very easy.

yFiles - the diagramming SDK



Privacy Lens by trust hub

A close-up view of risks

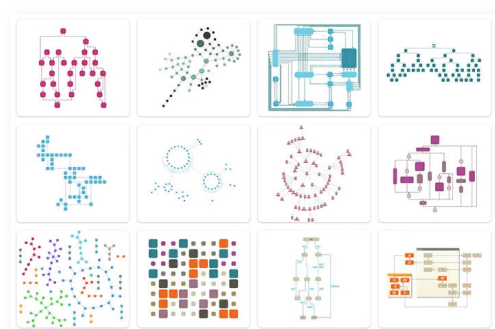
trust-hub's Privacy Lens toolkit, offered as SaaS to enterprises, lets customers monitor how personal data is processed, used, and stored: at every level of their organization as well as within their "data supply chain". Privacy Lens makes it easy to pinpoint systems or processes that are creating compliance risk. And it's here that yFiles from yWorks plays a central role. Its task, in short, is to make complex relational data visible and easily digestible for the viewer. yFiles generates graph visualizations that help individuals to see and understand their data in a larger context.

Graphs are more than the typical "trees" used in organizational charts. Choosing the right layout highlights certain aspects for the user and delivers insights at a glance. Privacy Lens graphs needed alternate layouts to show specific attributes of the data – and yFiles had all the right algorithms on board. What's more, trust-hub wanted to overlay information onto the graphs, allowing users to query "Show me where the highest levels of business

risk occur, and the supporting data supply chain", or "Show me where we process sensitive data", or "Show me the data that directly or indirectly relies on service X" ...and more.

Flexibility and scalability

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yFiles offers countless layout options

and automatically laying it out, as well as using bespoke element designs. yFiles also makes it easy to create the user interactions that fit a specific use case – making for an ideal user experience.

Another selling point, according to Parton, was the yWorks commercial model. yFiles is offered as a royalty-free, perpetual license – and license cost does not increase with sales numbers, so scaling up is easy.

Why visualize?

Privacy Lens is geared toward a wide user base within a company. It's a collaborative tool available to the privacy, security, risk, and data teams, but it will also be used by process and data owners within the business to understand their area of responsibility. One of the side-effects of GDPR (and other recent privacy regulations) is that responsibility for the use of personal data is more wide-spread within an organization and is no longer managed exclusively by the security and privacy teams.

Early on, trust-hub realized that, if they wanted to help “non-specialists” understand complex data contexts, graphs are the ticket. Presenting a process or data owner with a visualization of their area of responsibility is a succinct and clear way to communicate the wider context as well as the specific details of relationships. “Using yFiles to depict complex sets of entities – and the interactions between

The majority of the required development was achieved by two UI devs within two agile sprints.



— Will Parton, CTO, trust-hub Ltd

them – is key to enabling understanding across a wide and diverse user base,” says Parton. “Good visualizations make the data ‘approachable’ and easy to understand.” During development, the yWorks team also contributed conceptual expertise to the project, sharing tips on how to best present the data.

Two developers, two sprints

“We initially looked to use an abstraction layer between our existing software and the yFiles API. However, during our follow-up investigation it became apparent that the structure of our software required some more fundamental changes,” Parton explains. Although trust-hub ended up rewriting a section of their software that implemented the graph visualization, the work was completed very quickly. Impressively so! “The majority of the required development was achieved by two UI devs within two agile sprints.” The yFiles API supports speedy development since it is well-documented and easy to learn, with good example source code.



yFiles is available for **5** different **platforms** and **technologies**:

HTML, JavaFX, Java (Swing), **WinForms**, and **WPF**
[yworks.com/yfiles/platforms](https://www.yworks.com/yfiles/platforms)

Privacy Lens runs as a SaaS service hosted in AWS. It is implemented a set of Java applications running in a Linux environment and is presented to users as a RESTful web-service API that may be viewed in a standard web browser. yFiles for HTML is used on the frontend, leveraging modern web browser capabilities. It's implemented in a server-agnostic way and can work with all kinds of backends.

Phase 1 (initial development and integration) is now complete. Feedback from customers has been resoundingly positive, reports Parton. Next, trust-hub will add some roadmap items, but these are secondary use cases. "There are also yFiles features that we currently do not employ, but that would bring benefit and insight to our Privacy Lens users." With yFiles, future extensions promise to be easy. Plus, the SDK's toolbox gets better every year!

There's more to explore!

Getting started with yFiles

Learn more about **yFiles**, the diagramming SDK, and its **powerful** and **flexible features** for **HTML**, **Java**, **.NET**, and **WPF** here: yworks.com/yfiles-overview



yFiles demos mentioned in this article

- Layout styles demo
- Organizational chart demo
- Interaction demos



Direct access to all of our demos: yworks.com/demos

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Test and experience **yFiles** **free** of charge!



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