Complexity: Leveraging Data While Being Human Centric

Chris Hagner

It is crucial to identify and mitigate insider risks within our organizations; however, there are two persistent challenges:

1. Leveraging ever more complex and disparate data sources for the mission.

2. Balancing this information system-driven approach with the human elements of our organization.

A holistic information system that can identify insider threat risks based on known data about our people and their actions addresses the first challenge. This is crucial because the technologies that make our people more productive and effective can also be used to damage an organization at a significant cost. Like most complex operational environments, there are not enough analysts to stay on top of the myriad of emerging threats. An information system capable of supporting analysis and the decision-making process is one option that can competently scale and keep pace with evolving risks.

Our industry must push beyond the 'low-hanging fruit' of cyber data to effectively counter insider threats. These data streams are (relatively) clean and structured. Thus, they can be straightforward to exploit for the mission. However, they often lack the real context needed to address the bigger picture, which is required for our monitoring and investigations. That context likely

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comes from bringing in data from other domains, and this is the hard work ahead of us. Non-cyber domains (e.g., social media, email, and other behavioral sources) are inordinately messy yet rich with signals and context. Tackling these challenges and utilizing other data sources for our insider risk mission is the smart way forward—not because it's straight-forward or that we're sure to succeed quickly, but because determining how to exploit these messy domains is the best preparation for the next generation of data sources, which will likely be even more complicated and offer greater value.

I'm deeply optimistic that our organizations are up for the first challenge, even if the journey is opaque and ongoing. However, we still must keep our eye on the second challenge: implementing an information system-driven approach while centering the human elements of our organization. As technology changes so quickly, it's easy to overlook the human side of the organization. This integration is one of the most critical design elements in any system.

Central to our thinking must be the question, "How do we ensure that the human stays at the center of our design?" For example, while OpenAI's ChatGPT is the definition of a 'black box,' when Microsoft released Bing Chat, powered by OpenAI's GPT-4, it offered the advantage of providing web links to documents used in its responses, which ChatGPT lacked. This is a perfect example of a relatively small feature fundamentally shifting how value and trust in a system are experienced by human users. Despite our massive technological advances, the need for human centered design is not to be overlooked.

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Furthermore, organizations have been countering insider risk well before we had abundant computing resources at our disposal. There's real potential that our obsession with ever-evolving information systems will downplay the assets and strengths foundational to a healthy organization. These assets are the people in the organization. Thus, the use of new technologies needs to be deployed with an eye for how they impact our foundation. In the most extreme case, our reliance on technical wizardry can overshadow the need for a strong, healthy, and mission-focused culture. If that happens, our organizations will be fundamentally weakened and less effective.

We need to do the hard work and push for integrating domain data that is far beyond our typical 'low-hanging fruit.' Let's push these boundaries for the context they bring to our investigations and for the possibility of even more exciting data streams in the future. As we do this work, let's keep the human in the center of our designs. As we roll out new technical capabilities, let's be mindful of and alert to how they impact our culture and the people within our organizations. ⌄