Insider Incidents in the Food and Beverage Industry

Insights into the CERT National Insider Threat Center (NITC) Incident Corpus

Software Engineering Institute
Carnegie Mellon University
Pittsburgh, PA 15213

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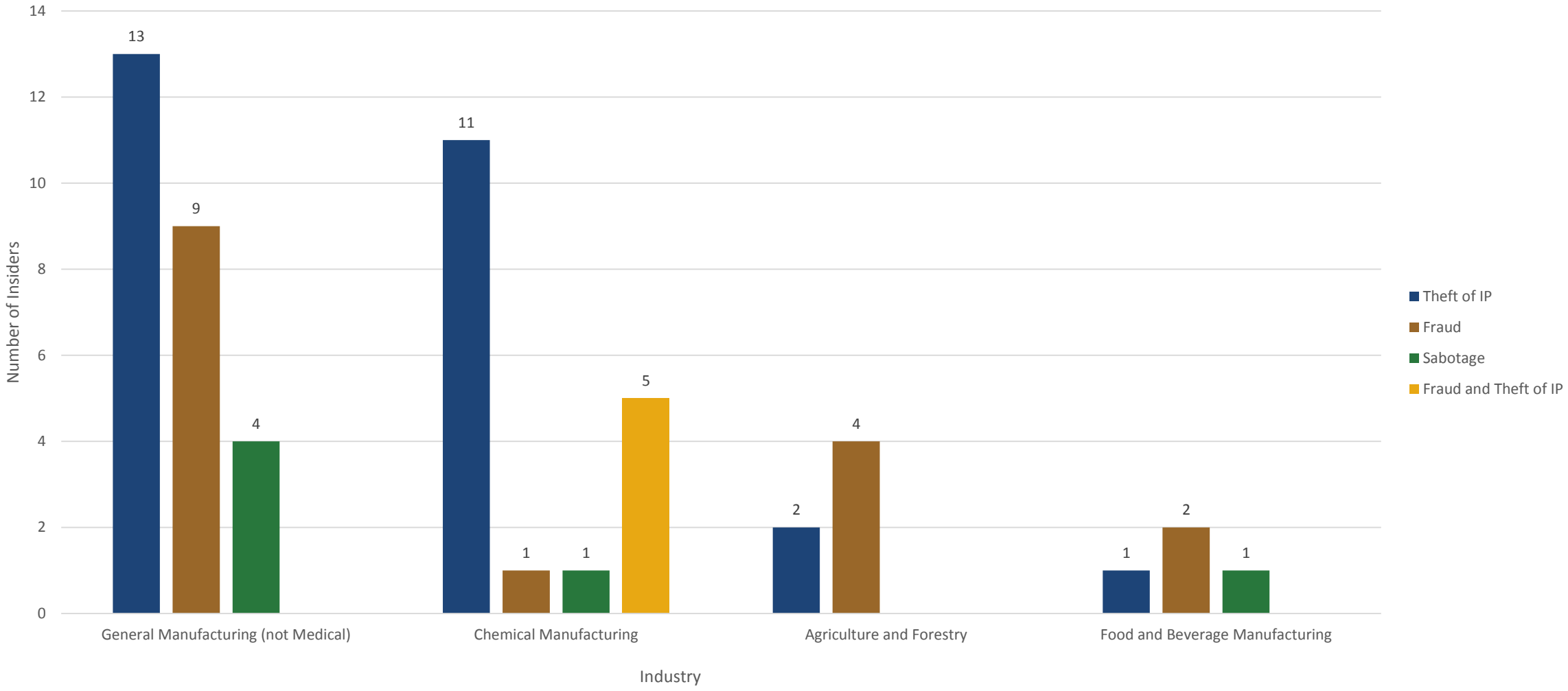
A Note about the Cases

The statistics and figures represented in the remaining slides are limited to:

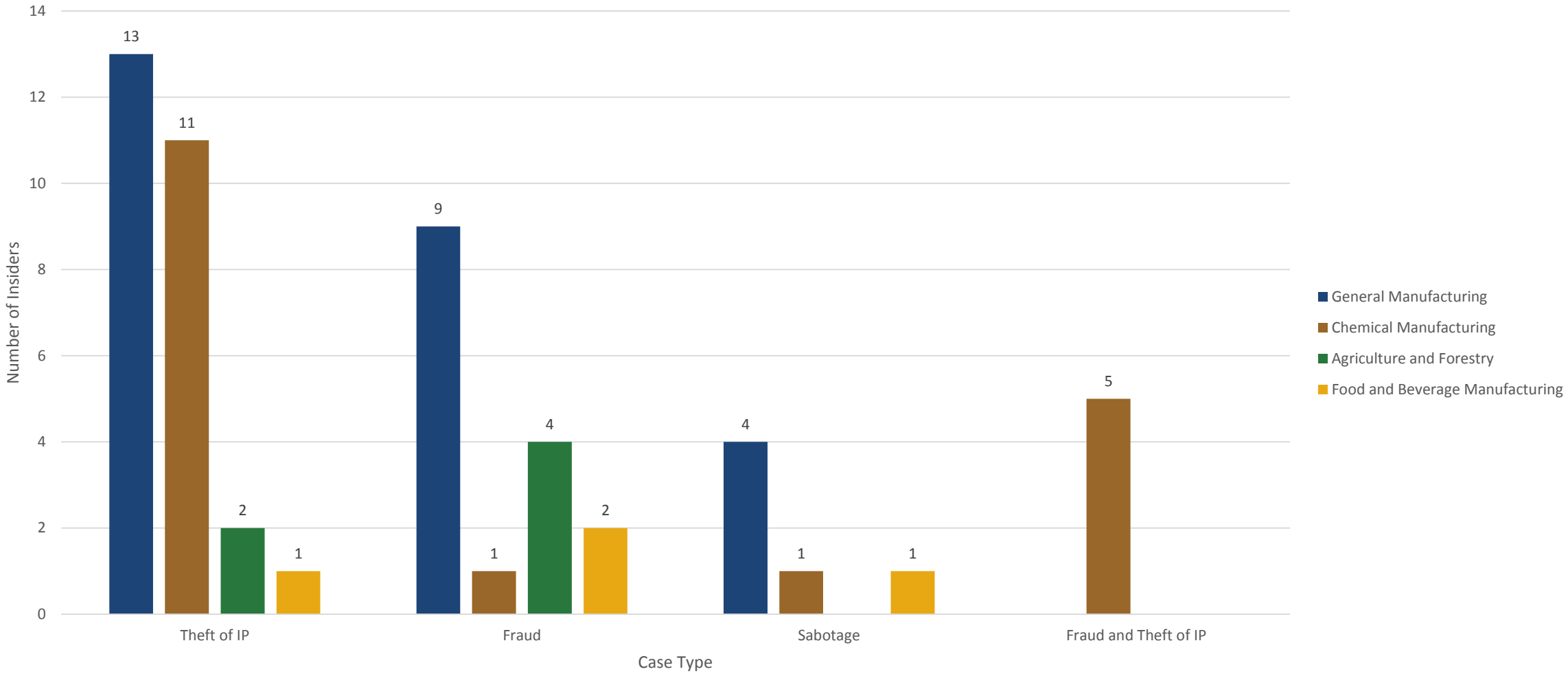
- Domestic incidents with publicly available information that were not dismissed or otherwise settled out of court
  - These incidents primarily took place in federal criminal courts
- Malicious insiders
- Cases identified as Fraud, Sabotage, Theft of IP, or Misuse
- Victim organizations identified as Agriculture and Forestry, Food and Beverage Manufacturing, Chemical Manufacturing, and General Manufacturing (not Medical).

The categories of information are not intended to be exhausted of what is documented in the CERT Insider Threat Incident Corpus, but provide a sample of information.

Industry by Case Type



Case Type by Industry



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Case Examples

IT Sabotage

The insider was hired to develop a computer program that would enable the organization's sales and delivery employees, located across the country, to use hand held devices to communicate with the organization's headquarters.
The program and devices would maintain product information, receipts, accounts receivable data, and other functions.

The insider was employed as a systems architect by the victim organization, a snack-food manufacturer.

The insider repeatedly missed deadlines, slowed down program tested, and was consequently demoted due to poor performance.

- Two weeks later, the insider resigned and left the organization.
- Prior to resignation, the insider installed a logic bomb on the organization's systems, which was designed to affect the organization's handheld communication devices.

Three months after the insider's resignation, on the anniversary of the insider's hire date at the organization, a logic bomb was activated that caused the organization's network to be inoperable for a 24 hour time period.

- Over 824 handhelds were disabled, and the organization was unable to communicate with sales and delivery employees across the U.S for several days.
- The incident related impact was $300,000 to $1 million. The incident was connected to the insider by a manager, who noted that the insider had changed the code when the logic bomb was added.

The insider was arrested, convicted, ordered to pay more than $190,000 in restitution, and sentenced to 24 months of imprisonment followed by 3 years of supervised release.

- The insider claimed to be involved with the hacking community and that they were accused on multiple occasions of perpetrating acts of computer crime against various systems and agencies.
- Investigators discovered webpages that the insider had stored on a hard drive which illustrated their hacking abilities.

Fraud

The insider was a full-time accounting official for the victim organization, an agriculture and food company. Over the course of about 10 years, the insider stole $3.1 million from the victim organization and caused over $25 million in additional losses. The insider stole hundreds of customer payments sent to the victim organization, totaling at least $3.1 million. The insider deposited the payments into their personal bank accounts. The insider also created fraudulent invoices and mailed them to the victim organization's customers, directing them to send payment directly to the insider, thereby bypassing the victim organization's corporate controls. To hide their activities, the insider made false entries into the victim organization's accounting software. The insider was sentenced to 60 months in prison and 2 years of supervised release. The insider was also ordered to pay $3.6 million in restitution, which reflected their embezzlement and falsified tax returns that they submitted over the course of the scheme.

Fraud

The insider was a sales executive for the victim organization, a food and beverage manufacturer. The insider was required to manage a portion of the promotional activities for the victim organization's products. Over the course of about 10 years, the insider submitted more than $1.7 million worth of fraudulent invoices. The insider incorporated a business in their spouse's name. Through this business, the insider submitted to the victim organization more than 200 fraudulent invoices totaling $1.7 million for services such as promotional signs and banners, delivery of sample products to retail stores, and the offering of discount prices to retail stores. None of the services billed to and paid for by the victim organization were actually provided. Additionally, the insider admitted that they failed to declare any of the income they derived through their business on the joint federal tax filings they filed with their spouse. The insider was charged, pled guilty, and sentenced to 33 months in prison, 2 years of supervised release, and over $2 million in restitution.

Theft of IP

The insider was employed as an executive administrative assistant to a top executive in the victim organization, a beverage manufacturer. The insider's proximity to the executive granted them access to the organization's trade secret information, including confidential and proprietary documents, and product samples that had not been publicly released.

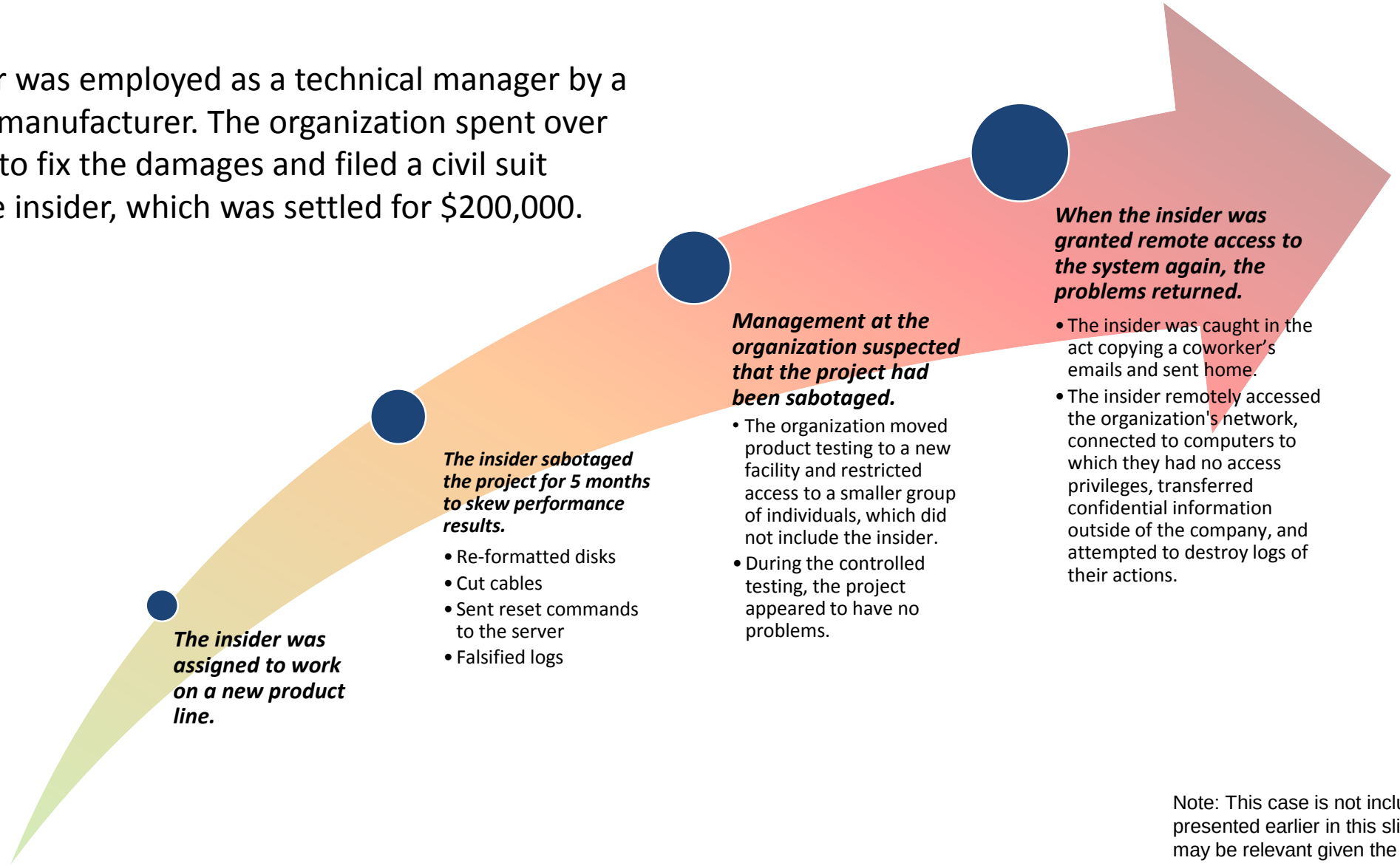
Over the course of two months, the insider exfiltrated data by:

- Placing trade secret documents and a product sample into their bag
- Copying or printing documents (including email communications) and stealing others
- Fax

The insider was convicted, ordered to pay $40,000 restitution, and sentenced to 8 years imprisonment followed by 3 years of supervised release. The insider's substantial credit card debt, which was equal to their yearly salary, likely motivated them to perpetrate the incident. The insider had violated employment and confidentiality agreements.

IT Sabotage

The insider was employed as a technical manager by a computer manufacturer. The organization spent over $1 million to fix the damages and filed a civil suit against the insider, which was settled for $200,000.



The insider was assigned to work on a new product line.

The insider sabotaged the project for 5 months to skew performance results.

- Re-formatted disks
- Cut cables
- Sent reset commands to the server
- Falsified logs

Management at the organization suspected that the project had been sabotaged.

- The organization moved product testing to a new facility and restricted access to a smaller group of individuals, which did not include the insider.
- During the controlled testing, the project appeared to have no problems.

When the insider was granted remote access to the system again, the problems returned.

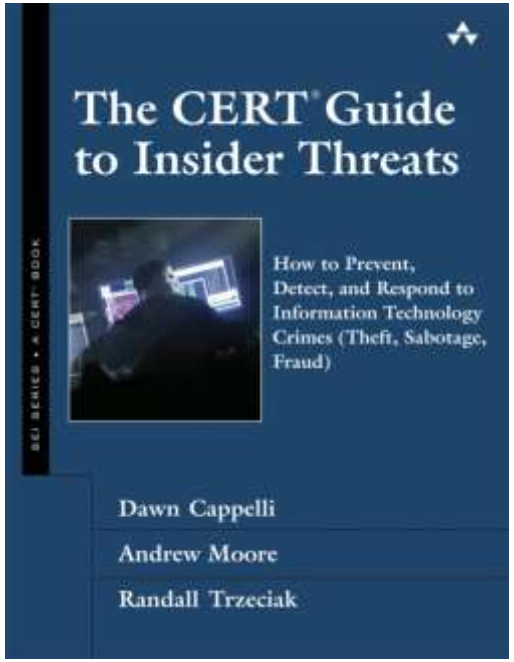
- The insider was caught in the act copying a coworker's emails and sent home.
- The insider remotely accessed the organization's network, connected to computers to which they had no access privileges, transferred confidential information outside of the company, and attempted to destroy logs of their actions.

Note: This case is not included in the statistics presented earlier in this slide deck, but the scenario may be relevant given the context.

Additional Resources

NITC Publications and References

- Theis, M. C., Trzeciak, R. F., Costa, D. L., Moore, A. P., Miller, S., Cassidy, T., & (2019) Claycomb, W. R. Common Sense Guide to Mitigating Insider Threats (6th Ed.). Pittsburgh: Software Engineering Institute.
- Cappelli, D. M., Moore, A. P., & Trzeciak, R. F. (2012). The CERT® Guide to Insider Threats: How to Prevent, Detect, and Respond to Information Technology Crimes (Theft, Sabotage, Fraud). Addison-Wesley Professional.
- Moore, Andrew; Savinda, Jeff; Monaco, Elizabeth; Moyes, Jamie; Rousseau, Denise; Perl, Samuel; Cowley, Jennifer; Collins, Matthew; Cassidy, Tracy; VanHoudnos, Nathan; Buttles-Valdez, Palma; Bauer, Daniel; & Parshall, Allison. The Critical Role of Positive Incentives for Reducing Insider Threats. CMU/SEI-2016-TR-014. Software Engineering Institute, Carnegie Mellon University. 2016.



For More Information on Insider Threat

National Insider Threat Center	http://www.cert.org/insider-threat/
National Insider Threat Center Email	insider-threat-feedback@cert.org
Insider Threat Blog	http://insights.sei.cmu.edu/insider-threat/
SEI Digital Library	https://resources.sei.cmu.edu/library/

Contact Information

Sarah Miller

Insider Threat Researcher

CERT National Insider Threat Center

Email: semiller@cert.org

Software Engineering Institute

Carnegie Mellon University

4500 Fifth Avenue

Pittsburgh, PA 15213-3890