11.25.2027

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ARMY CYBER INSTITUTE
AT WEST POINT

BUILDING A BETTER, STRONGER AND MORE SECURE FUTURE FOR OUR ARMED FORCES

Science Fiction Prototypes are science fiction stories based on future trends, technologies, economics, and cultural change. The story you are about to read is based on threatcasting research from the Army Cyber Institute at West Point and Arizona State University's Threatcasting Lab. Our story does not shy away from a dystopian vision of tomorrow. Exploring these dark regions inspires us to build a better, stronger, and more secure future for our Armed Forces.

Once a year, Americans sit down to a Thanksgiving meal that unites us in gratitude for our safety and security. As many follow the celebration with a football game or an after-dinner nap, our defense automated supply chain never sleeps.

Our economy is becoming more and more automated. Between global supply chains and high frequency trading, our national and economic security is increasingly dependent on automation and AI. But what safeguards monitor the machines that we depend upon? On Thanksgiving Day 2027, robots and algorithms will hyper-efficiently run our supply chains, but are these systems themselves secure?

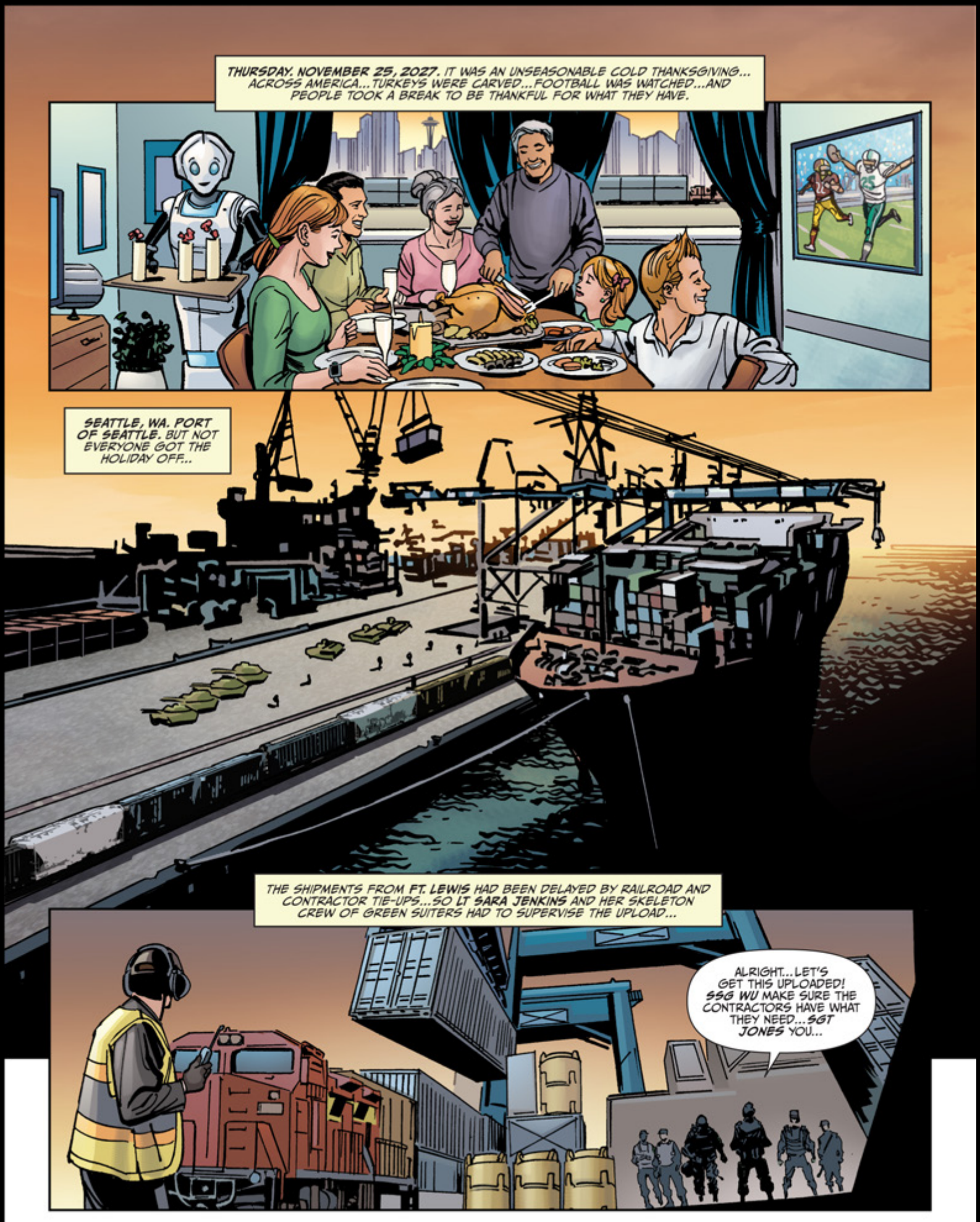
Lt. Col. Glenn Robertson
U.S. Army, Signal

11-25-2027

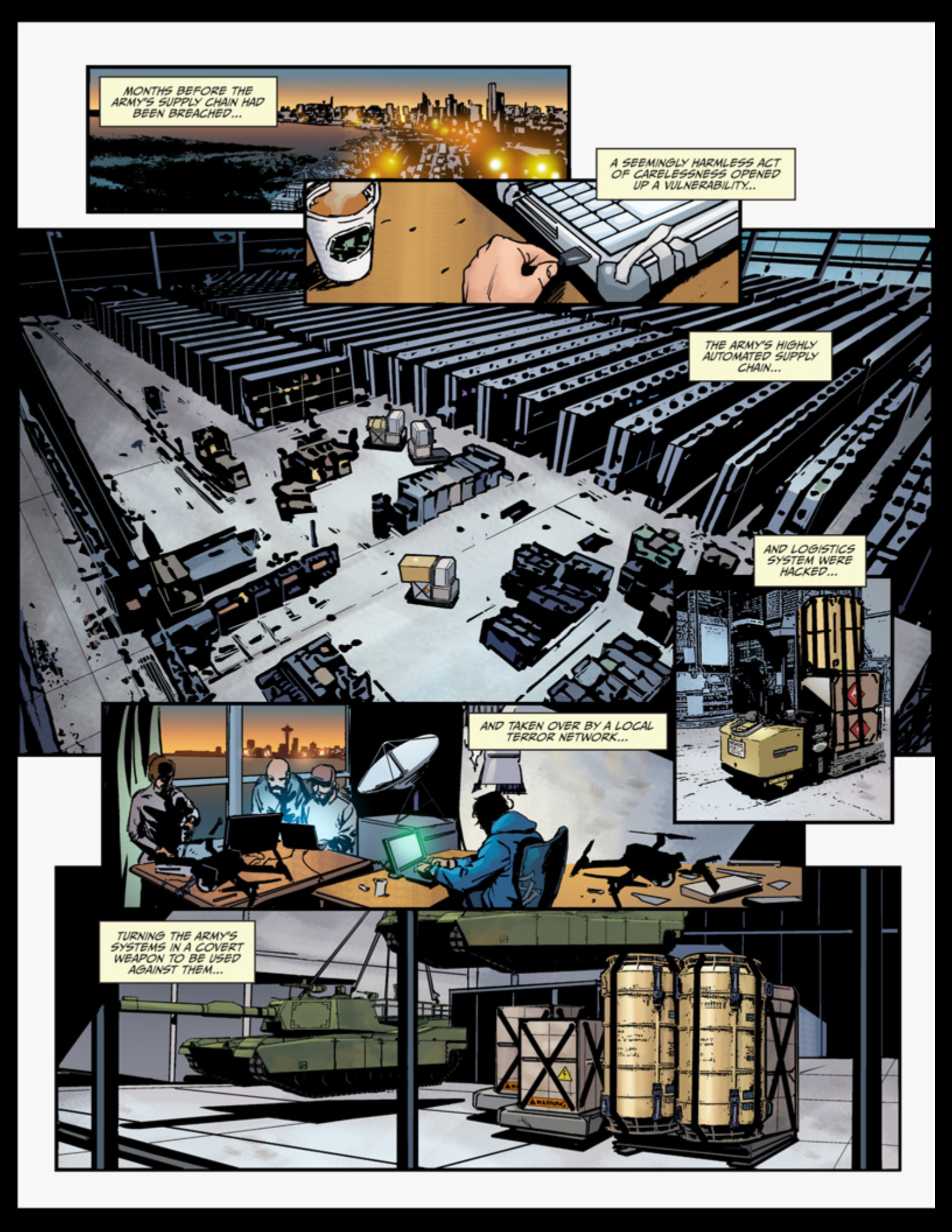
The shipments from Fort Lewis were delayed two days, leaving Lt. Jenkins and her skeleton crew to supervise the load at the docks on Thanksgiving day. Without a second thought, one of them tweets, “Finally … looks like I will get some turkey! #hatemylife” … and the attack begins.

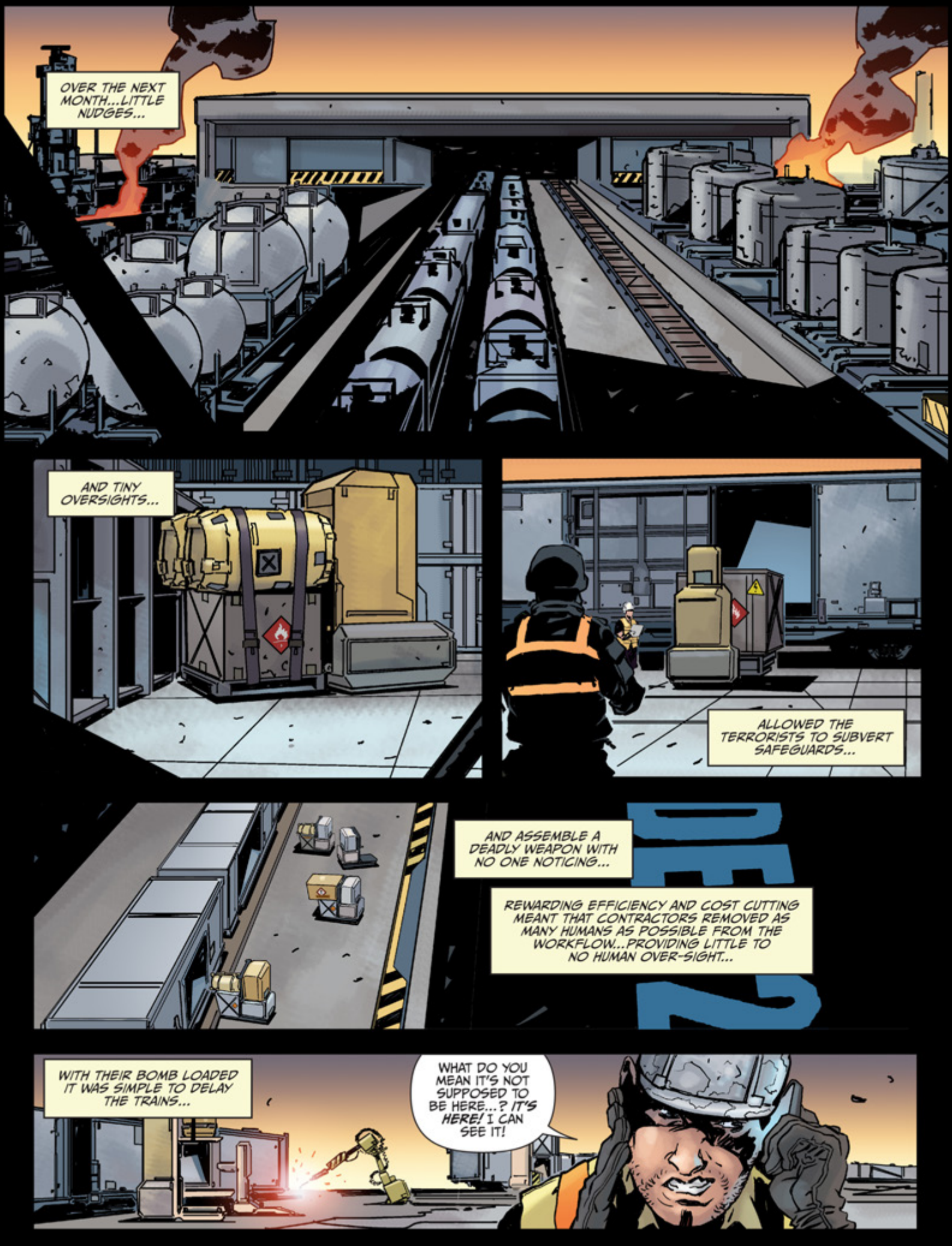
Months before, the Army’s highly automated supply chain and the deployment planning system had been breached, turning them into a weapon for a local terror cell. Little errors and minimal oversight have sent a deadly payload to the docks of Seattle, WA.

A pair of autonomous drones fly on a collision course with a specially loaded railcar … millions will die. No one will ever forget 11/25/27.


THURSDAY. NOVEMBER 25, 2027. IT WAS AN UNSEASONABLE COLD THANKSGIVING... ACROSS AMERICA...TURKEYS WERE CARVED...FOOTBALL WAS WATCHED...AND PEOPLE TOOK A BREAK TO BE THANKFUL FOR WHAT THEY HAVE.
SEATTLE, WA. PORT OF SEATTLE. BUT NOT EVERYONE GOT THE HOLIDAY OFF...
THE SHIPMENTS FROM FT. LEWIS HAD BEEN DELAYED BY RAILROAD AND CONTRACTOR TIE-UPS...SO LT SARA JENKINS AND HER SKELETON CREW OF GREEN SUITERS HAD TO SUPERVISE THE UPLOAD...
ALRIGHT... LET'S GET THIS UPLOADED! SSG WU MAKE SURE THE CONTRACTORS HAVE WHAT THEY NEED... SGT JONES YOU...


FINALLY... LOOKS LIKE I WILL GET SOME TURKEY! #HATEMYLIFE
YES, MA'AM!
About ready to get moving. Should be home in a few hours.
Message Sent
DTA-SE@. SECURE
USER DATA: 347186v
About ready to get moving. Should be home in a few hours.
VERIFY:187324
Great! Turkey is in the oven. Your mom is helping me. The twins are being brats.
BUT SOMEONE WAS WATCHING...
AND NOW THEY KNEW THAT THEIR MONTHS OF WORK HAD PAID OFF... TWO DRONES WERE LAUNCHED...AN EXPLOSIVE TRIGGER AND DEADLY SYNTHETIC BIOLOGICAL AGENT...
C4
HIGH EXPLOSIVE


MONTHS BEFORE THE ARMY'S SUPPLY CHAIN HAD BEEN BREACHED...
A SEEMINGLY HARMLESS ACT OF CARELESSNESS OPENED UP A VULNERABILITY...
THE ARMY'S HIGHLY AUTOMATED SUPPLY CHAIN...
AND LOGISTICS SYSTEM WERE HACKED...
AND TAKEN OVER BY A LOCAL TERROR NETWORK...
TURNING THE ARMY'S SYSTEMS IN A COVERT WEAPON TO BE USED AGAINST THEM...


OVER THE NEXT MONTH...LITTLE NUDGES...
AND TINY OVERSIGHTS...
ALLOWED THE TERRORISTS TO SUBVERT SAFEGUARDS...
AND ASSEMBLE A DEADLY WEAPON WITH NO ONE NOTICING...
REWARDING EFFICIENCY AND COST CUTTING MEANT THAT CONTRACTORS REMOVED AS MANY HUMANS AS POSSIBLE FROM THE WORKFLOW...PROVIDING LITTLE TO NO HUMAN OVER-SIGHT...
WITH THEIR BOMB LOADED IT WAS SIMPLE TO DELAY THE TRAINS...
WHAT DO YOU MEAN IT'S NOT SUPPOSED TO BE HERE...? IT'S HERE! I CAN SEE IT!


SO THAT THEIR BOMB WOULD ARRIVE ON A DAY WITH THE MAXIMUM NUMBER OF CASUALTIES...
ALRIGHT...LET'S GET THIS UPLOADED! SSG WU MAKE SURE THE CONTRACTORS HAVE WHAT THEY NEED... SGT JONES YOU...
YES, MA'AM!
FINALLY... LOOKS LIKE I WILL GET SOME TURKEY! #HATEMYLIFE
THE FIRST AUTONOMOUS DRONE CRASHED... IGNITING SHIPMENTS THAT SHOULD HAVE NEVER BEEN TOGETHER...SETTING OFF A CHAIN REACTION...
CAUSING THE SECOND DRONE TO BLOW...DISPERSING THE SYNTHETIC BIOLOGICAL AGENT INTO THE AIR AND WATER...
THE CASUALTIES WERE UNIMAGINABLE BUT THE REAL HORROR WAS THE RECOVERY...
NO ONE WOULD EVER FORGET 11/25/27...
THE END

"I don't need my own robot army as long as I can commandeer yours."

Colonel Greg Conti
U.S. Army Retired

AFTERWORD

In the port of Seattle, an Army of robots conducts their repetitive task of off-loading delicate cargo from trains. We're all thankful for robots that don't need a day off for Thanksgiving. But who's watching the robots to see what ingredients were mixed together?

In the future, machines will increasingly automate menial and complex tasks. How do we ensure the effectiveness of safety-related functions? Have we taken into account not just the chance of random failures, but also acts of an adversary seeking to subvert these systems?

Whereas developing high-performing human operators and safety personnel once took decades of training and experience, it can now be imparted to machines in seconds. However, does this knowledge contain everything a machine needs to know "in case of emergency?"

In a world where safety is not the only concern, how do we understand the danger of cyber threats combined with the physical world? As cyber-physical systems and interactions become more complex, how do we visualize the threat adequately and defend ourselves accordingly?

By lowering the cost of doing business, we make our systems more competitive in the global economy. As our systems become more "efficient", how do we evaluate the risk of trading off efficiency for security?

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