



# Optimize the Passenger Experience. Maximize Your Profitability.

Network Operations from GE Aviation's Digital Group



# What is Network Operations?

Network Operations is an advanced product suite of digital solutions for commercial airlines designed to help manage and mitigate disruptions.

By minimizing the impact of delays, cancellations and other disruptions, Network Operations enables airlines to improve passenger satisfaction, reduce costs, increase profitability and achieve overall operational excellence.

Disruptions like weather, mechanical issues, unavailable crew or security delays can impact your schedule, crew, passengers, maintenance, airport and overall bottom line.

## One product to help you manage potential airline disruptions

Solutions within Network Operations can help reduce disruption costs for commercial airlines up to 20% with real-time disruption management and operational efficiency. This portfolio of products offers operations insights, recovery optimization and passenger protection to minimize the impact of delays and cancellations.

The ultimate goals? To improve your customer's experience with your airline and increase your profitability.

## Operational challenges

**50-60%**

of disruptions are caused by technical and operational delays

**7-10%**

of disruptions are caused by extreme weather

**41%**

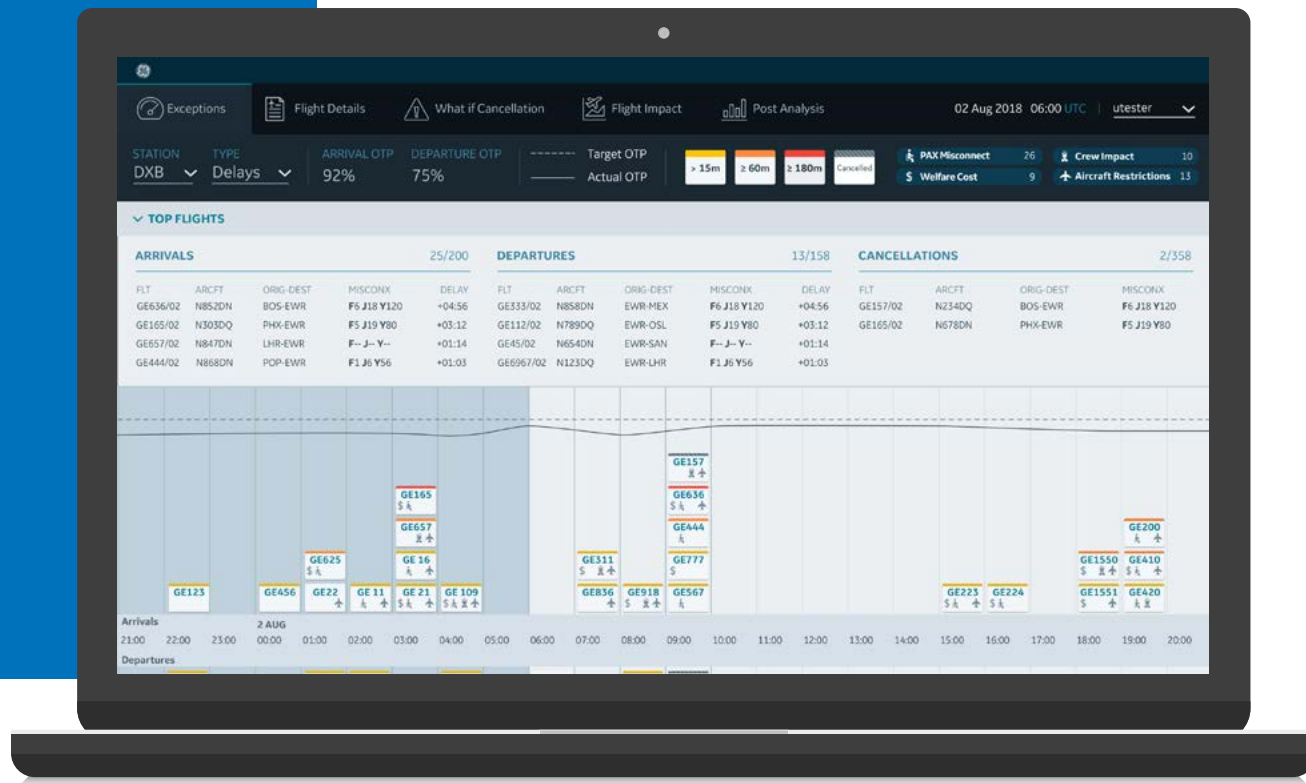
of disruptions are caused by non-extreme weather



**\$25,000,000,000**

Commercial airlines face numerous challenges due to delays and cancellations—it's how your airline handles them that sets you apart. Your response could mean the difference between a seamless passenger experience and a loss of brand loyalty.

Airlines spend an average of \$281 per disrupted passenger. Annually, airlines worldwide **lose \$25 billion** due to delays, cancellations and other irregular operations.



### Decreasing passenger misconnections, minimizing rebookings on other airlines and avoiding hotel or meal compensation:

Automate the rebooking of new itineraries, use personalized notifications for passengers, monitor notifications and confirmations and enhance the overall passenger experience. Network Operations identifies disrupted passenger itineraries, rapidly finds alternate flights using available seat inventory, prioritizes passengers for rebooking, and sends timely notifications.

### Mitigating weather delays and lessening the loss of airport slots:

Execute flight schedule changes and cancellations, conduct aircraft routing and equipment swaps and make fixes to crew assignments and pairing. Network Operations' easy-to-use dashboards deliver at-a-glance views across the organization, enabling better, faster decision-making from the executive suite to operations and maintenance.

### Preventing mechanical disruptions:

Minimize impacts to flights, crews, passengers, aircraft routes and maintenance with fast solutions to large-scale problems. Network Operations enables full operational awareness and visibility through seamless integration into any IT operating system and comprehensive analysis among all departments.

### Avoiding a repeat of costly disruptions within your airline:

Dynamically select a range of factors to look into the future and gain insights into the effect of anticipated disruptions. Products of Network Operations provide post-event analysis for airlines to assess operations over specific periods in the past, including side-by-side analysis of the actual and predicted cost, helping drive internal policy changes.

# Overcome today's #1 challenge with Network Operations

Irregular operations cost airlines in measurable and immeasurable ways—neither of which is ideal for business.

**Measurable impacts** include operating costs, on-time performance, passenger compensation and rebooking fees. More subjective impacts include negative press, lowered passenger satisfaction and a potential loss of brand loyalty and reputation.

Network Operations helps mitigate the effects of irregular operations, empowering airlines to manage operations and maintain their brand reputations.

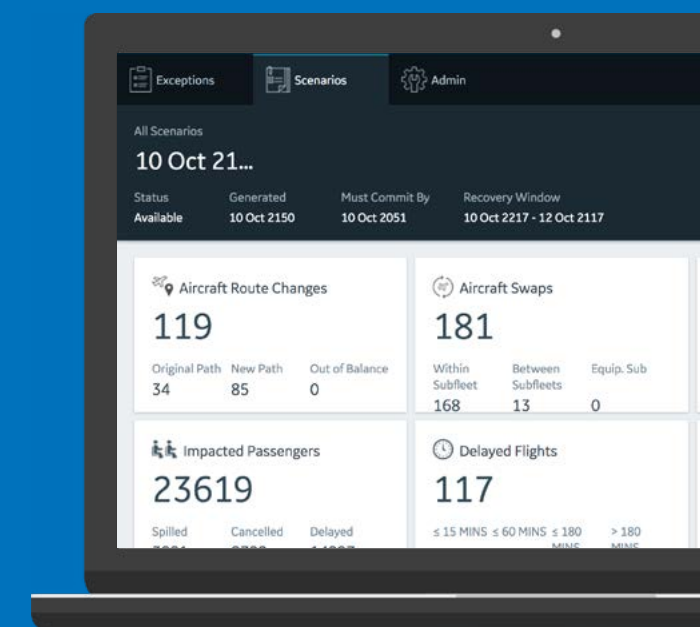
### Reducing delays and cancellations:

Use data to make the most informed decisions to maximize customer satisfaction and minimize cost. Products of Network Operations improve the recovery time of aircraft, crew and passenger schedules and prevent disruptions from propagating through the network schedule.



## Network Operations outcomes

- Reduce delays and cancellations
- Lower the occurrence of misconnections
- Protect high-revenue flights and loyal passengers
- Minimize rebookings on other airlines
- Reduce the loss of airport slots
- Avoid compensation for hotels and meals
- Manage crew and passenger welfare
- Mitigate weather delays
- Prevent mechanical disruptions





# Network Operations product suite capability

Irregular operations can equate to a 4% revenue and cost impact. The faster your airline operations can recover from unexpected delays and cancellations, and the faster passengers can be rebooked and on their way, the faster you can protect revenue and improve the passenger experience.

## Leadership

GE Aviation's Digital Group is the only solutions provider for airlines to combine in-depth expertise with advanced optimization technology to help airlines recover faster from disruptions. The proven Network Operations suite of digital solutions is compliant, flexible, adaptable and system agnostic.

## Experience

The solutions in the Network Operations portfolio have been developed and improved over the past 20 years, with more than 1 million man hours invested. These solutions are used by prominent commercial airlines for advanced planning optimization and recovery.

## Innovation

Network Operations is the only suite of digital applications for commercial airlines that combines real-time data from multiple systems with best-in-class algorithms to deliver cost, revenue and operational insights, resulting in faster, smarter and automated decision-making.



### The Scenario:

Your airport has been closed for 6 hours due to an unforeseen event. 200 flights and 30,000 passengers have been impacted.



### Operations Insights

Disruptions are often time-critical and too complex for manual processing. Network Operations provides disruption visibility with real-time data to facilitate operations decision-making by displaying the impact to crew, passengers, and revenue. You can immediately detect live problems, or input anticipated disruptions to gain insights into the network effect.



### Recovery Optimization

Once a disruption event has been identified, Network Operations helps you take action to recover, whether it be swapping equipment, rebooking passengers, or moving and extending crews. The goal is to minimize the impact to flights, crew, and passengers. Designed for high-speed computing, the optimizer is used for small and large-scale disruptions.



### Passenger Protection

Instantly detect disrupted passengers, identify misconnections and cancellations, and report on disrupted passenger status and airport congestion. Network Operations allows you to prioritize PNRs according to airline objectives and passenger value, and quickly generate new itineraries to minimize cost and retain revenue.

# Customer savings

## Projected:

Based on customer validation and public information for 2016, a growing low-cost carrier we assessed was found to have the potential of a multi-year savings of more than \$38 million using the Network Operations suite of products.

Leveraging the value calculator from GE Aviation's Digital Group, your airline can calculate the potential savings from adopting the Network portfolio of products.

## Performance:

**18%**  
reduction in cancelled flights

**13%**  
reduction in delayed flights

**2%**  
improvement in on-time performance

## Savings:

**30%**  
reduced cancellation revenue loss

**8%**  
reduced delay revenue loss

**9%**  
reduced travel vouchers

**29%**  
reduced crew cost

**16%**  
reduced welfare cost

**9%**  
reduced customer call center cost



## Revenue:

Better for your brand,  
better for your bottom line

Network Operations helps save your operation millions through improved operational efficiencies. Recoup millions in lost revenue, improve the passenger experience, build greater brand loyalty, bring more accountability to operations, gain a competitive edge, and focus on growth.



## Operations:

Have complete visibility

Recover from and respond to irregular operations quickly and smartly by maintaining a centralized view of your entire organization. Network Operations helps you manage your data to take quick action to redeploy crews, reassign passengers, and respond to other disruptions, all while reducing operating costs and keeping operations running.



## Information technology:

Achieve critical outcomes at a lower cost

Applications within the Network Operations product suite are system agnostic and integrate with your existing systems. Implement Network Operations all at once or leverage the fast, cost-effective by recovery event offering.

Protect existing investments in other systems, applications or devices, deploy all-at-once or in a phased approach, all in the Cloud. Drive business outcomes right from your airline's network. Network Operations is available as a digital alternative to in-house development, providing unique visibility across airline operations.



## Maintenance:

Execute efficient, scheduled maintenance

Network Operations helps your airline protect critical maintenance during disruptions. Respecting aircraft scheduled maintenance drives costs down and improves overall airline efficiency.



Contact your GE Aviation representative at +1 (512) 452-8178 or via [aviationdigital@ge.com](mailto:aviationdigital@ge.com) to learn more about how your airline can benefit from Network Operations.



## Imagination at work

GE (NYSE: GE) is the world's Digital Industrial Company, transforming industry with software-defined machines and solutions that are connected, responsive and predictive. GE is organized around a global exchange of knowledge, the "GE Store," through which each business shares and accesses the same technology, markets, structure and intellect. Each invention further fuels innovation and application across our industrial sectors. With people, services, technology and scale, GE delivers better outcomes for customers by speaking the language of industry. [www.ge.com](http://www.ge.com).