

# **REBUILDING A LIFELINE:** Princess Juliana International Airport Case Study

Key Findings and Lessons for Post-Hurricane  
Reconstruction and Resilience



# Introduction

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The case study documents the journey to reconstruct the Princess Juliana International Airport (PJIA) passenger terminal after catastrophic damage from Hurricanes Irma and Maria in September 2017.

The study provides actionable guidance and lessons learned for disaster response and recovery and resilient infrastructure development, especially for small island states and regions vulnerable to climate risks.



# Why PJIA Matters

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- Primary gateway and economic lifeline for Sint Maarten
- Tourism ~45% of GDP; nearly 2 million annual passengers pre-2017
- Regional hub for northeastern Caribbean



# Catastrophe Strikes in 2017

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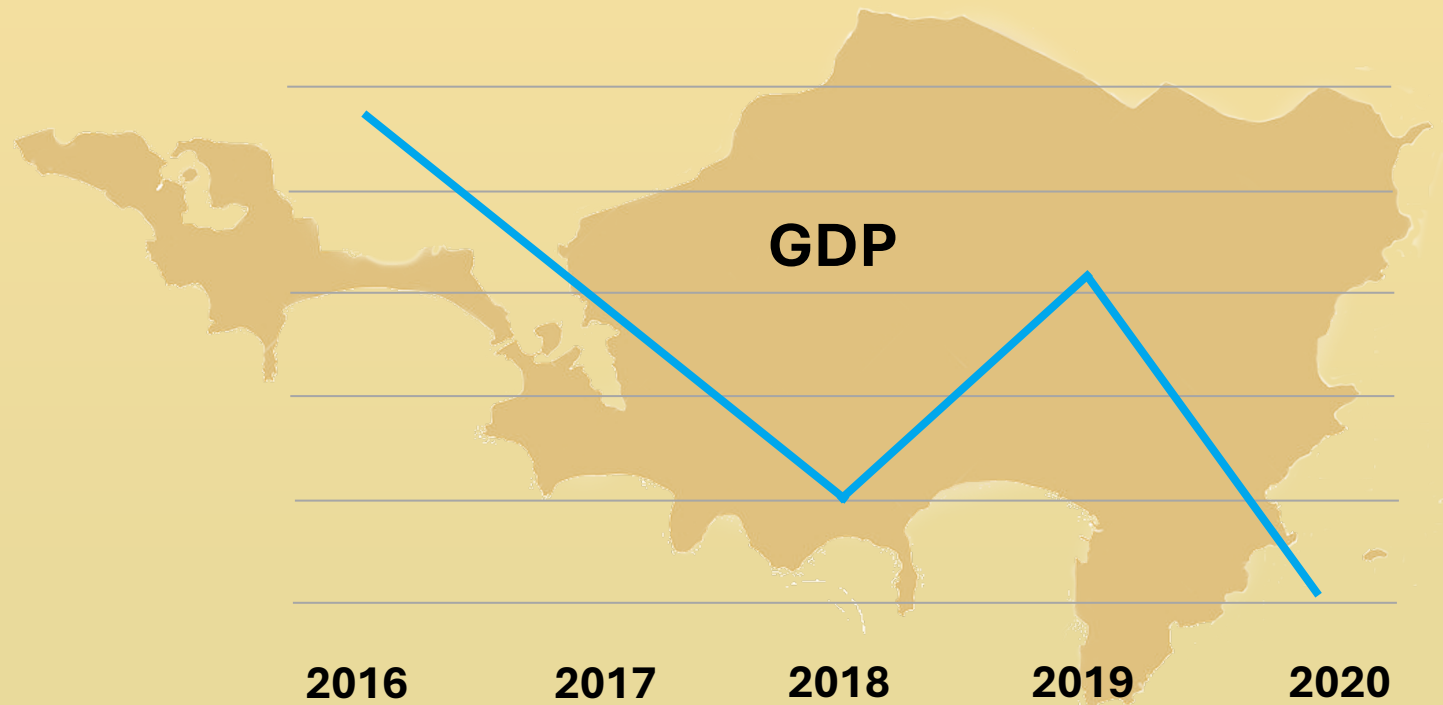
- September: Hurricanes Irma (Category 5) and Maria
- Roof and entrance doors destroyed; extensive water and mold damage
- Terminal rendered uninhabitable; full closure



# A Nation in Crisis

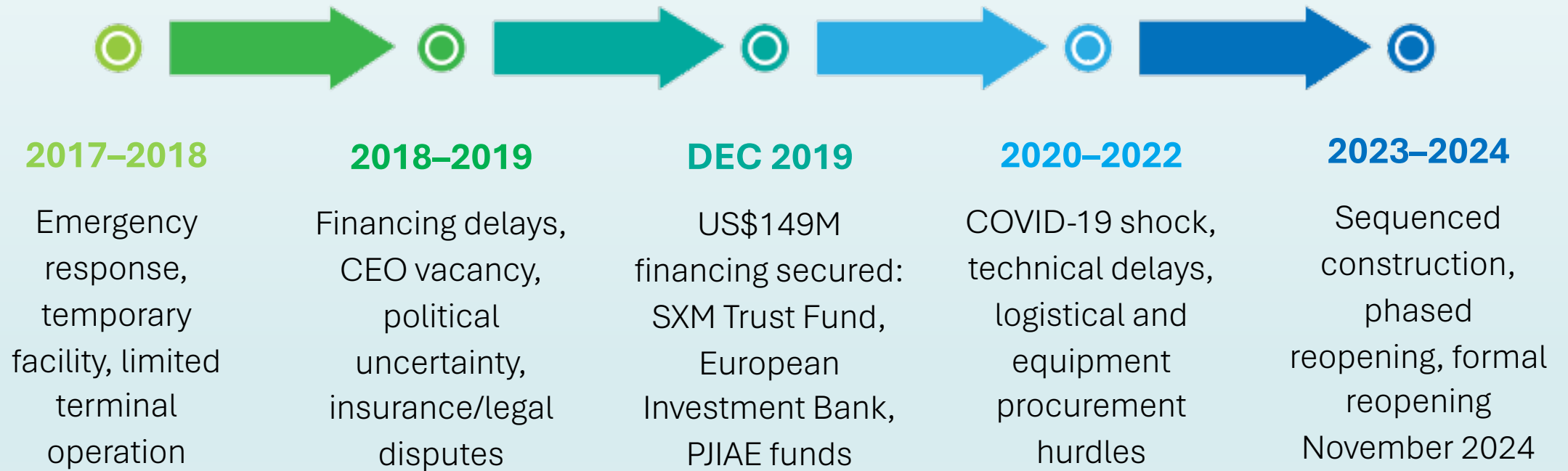
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- GDP contracted ~12% over two years
- Tourism revenues collapsed; widespread job losses
- Exposed risks of dependency on single infrastructure



# A Seven-Year Reconstruction Journey

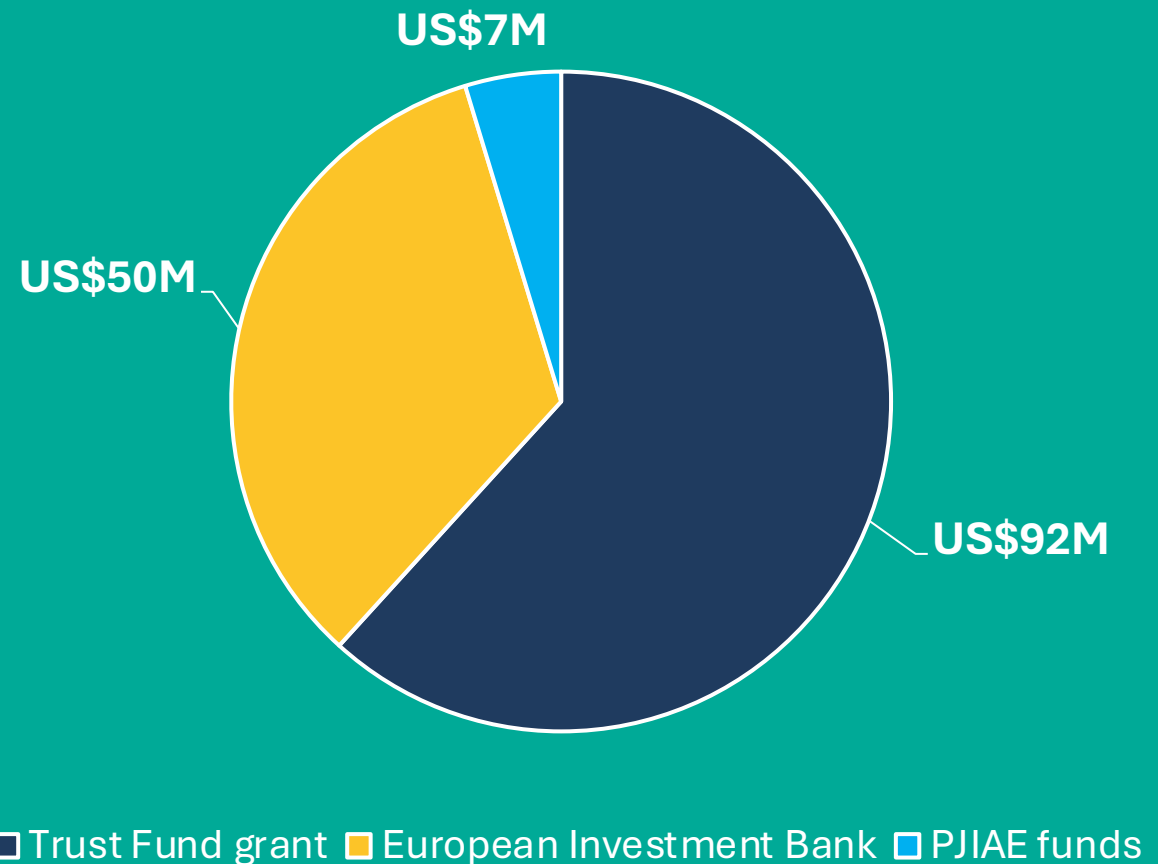
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# The Financing Breakthrough

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- December 2019: blend of US\$149 million secured
- Sources: World Bank–managed Sint Maarten Trust Fund; EIB; PJIAE’s own funds
- Blended structure enabled reconstruction and stabilized delivery



# Partnerships for Implementation Success

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- Dedicated Project Management Unit (PMU)
- Partners: NRPB, Royal Schiphol Group, World Bank
- Environmental and social standards aligned with rigorous World Bank requirements



# Build Back Better by Design

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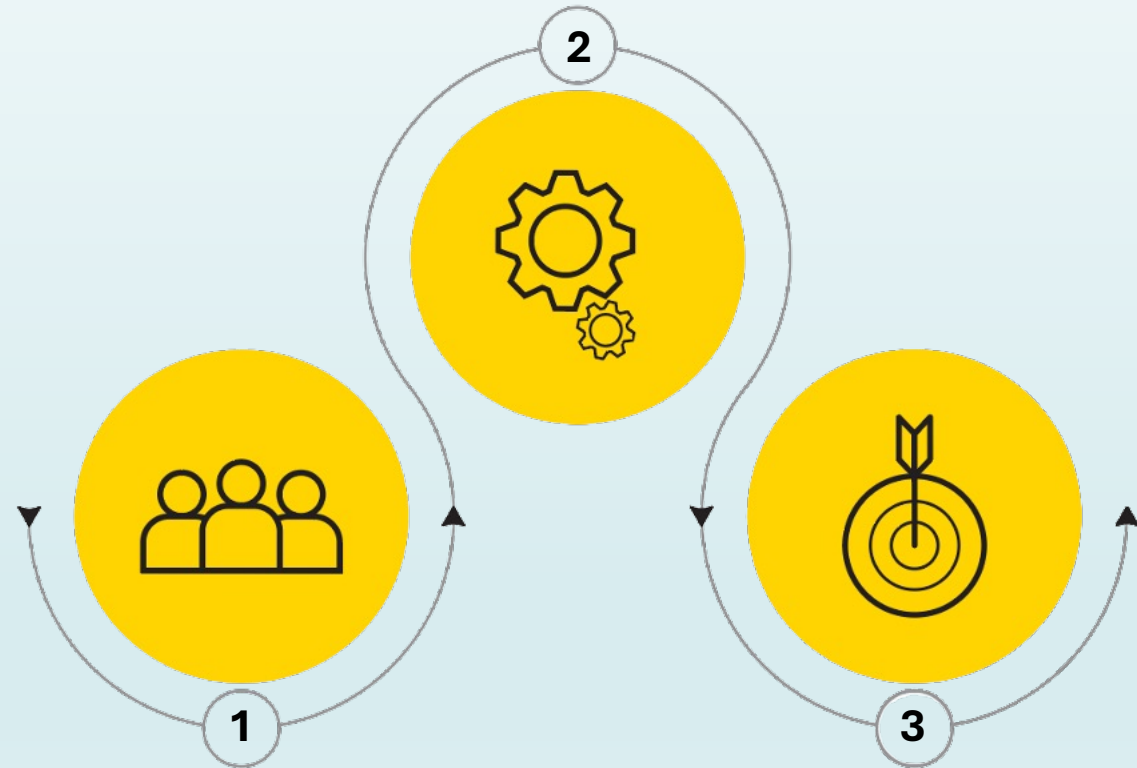
- Enhanced hurricane resistance (roof, doors, bridges; Category 5 tolerance)
- Humidity-resistant materials and improved building interfaces
- Energy efficiency: LED, high-efficiency HVAC, intelligent systems



# Phased Restoration and Continuity

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- Careful sequencing; night work to minimize disruption
- Temporary facilities; staged reopening of processing capacity
- Safety and service continuity balanced with construction efficiency



# Better Passenger Experience

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- Self-service baggage drops; expanded concessions
- Improved passenger flow; upgraded digital signage
- Modernized systems for smoother throughput



# Three Lessons Learned Areas

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## 1 DISASTER PREPAREDNESS

Insulate corporate governance from political interference

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Prepare business continuity plans and mutual aid agreements pre-disaster

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Diversify insurance and accurate asset valuation; prudent debt

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Diversify revenue beyond passenger traffic

## 2 INFRASTRUCTURE AND OPERATIONS

Design resilient roofs, doors, bridges; use humidity-resistant materials

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Set up temporary facilities and phased restoration plans

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Use flexible immigration policies and comprehensive worker support programs

## 3 PROJECT IMPLEMENTATION

Ensure experienced leadership, international partnerships, dedicated implementation unit

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Use rated procurement criteria to balance cost, quality, innovation

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Engage in transparent, early communications with stakeholders, public



# A Model for Climate-Adaptive Infrastructure

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- Tourism recovery and jobs restored; stronger institutional capacity
- PJIA positioned as a recovery and resilience model for small island states

**CALL TO ACTION:** Use Build Back Better design principles to transform disaster into opportunity

# For More Information



**SXMTF@  
worldbankgroup.org**

The Trust Fund delivers a range of analytical studies and technical assistance that support stakeholders in policymaking, long-term planning, and evidence-based public dialogue.