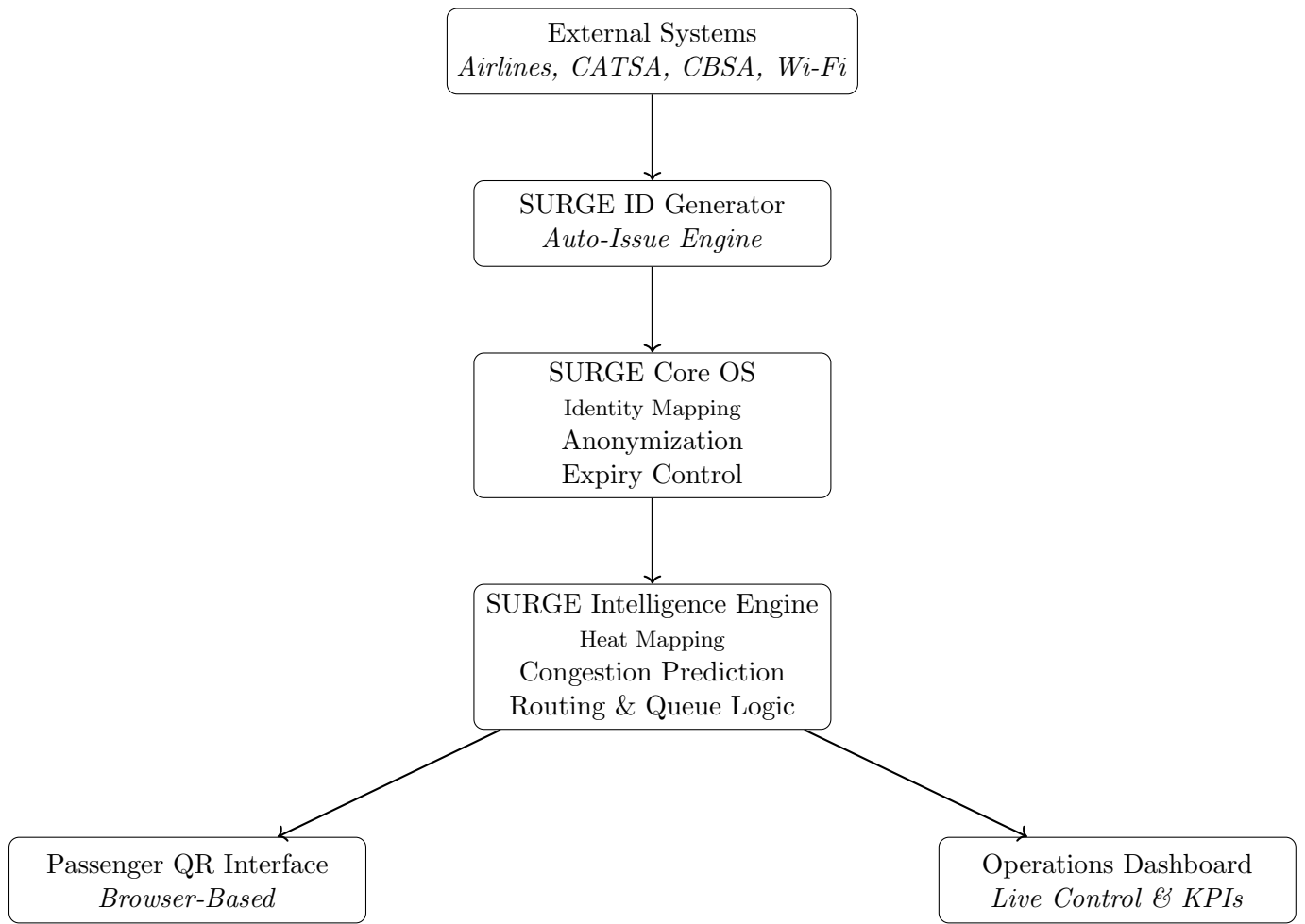


SURGE System Architectures

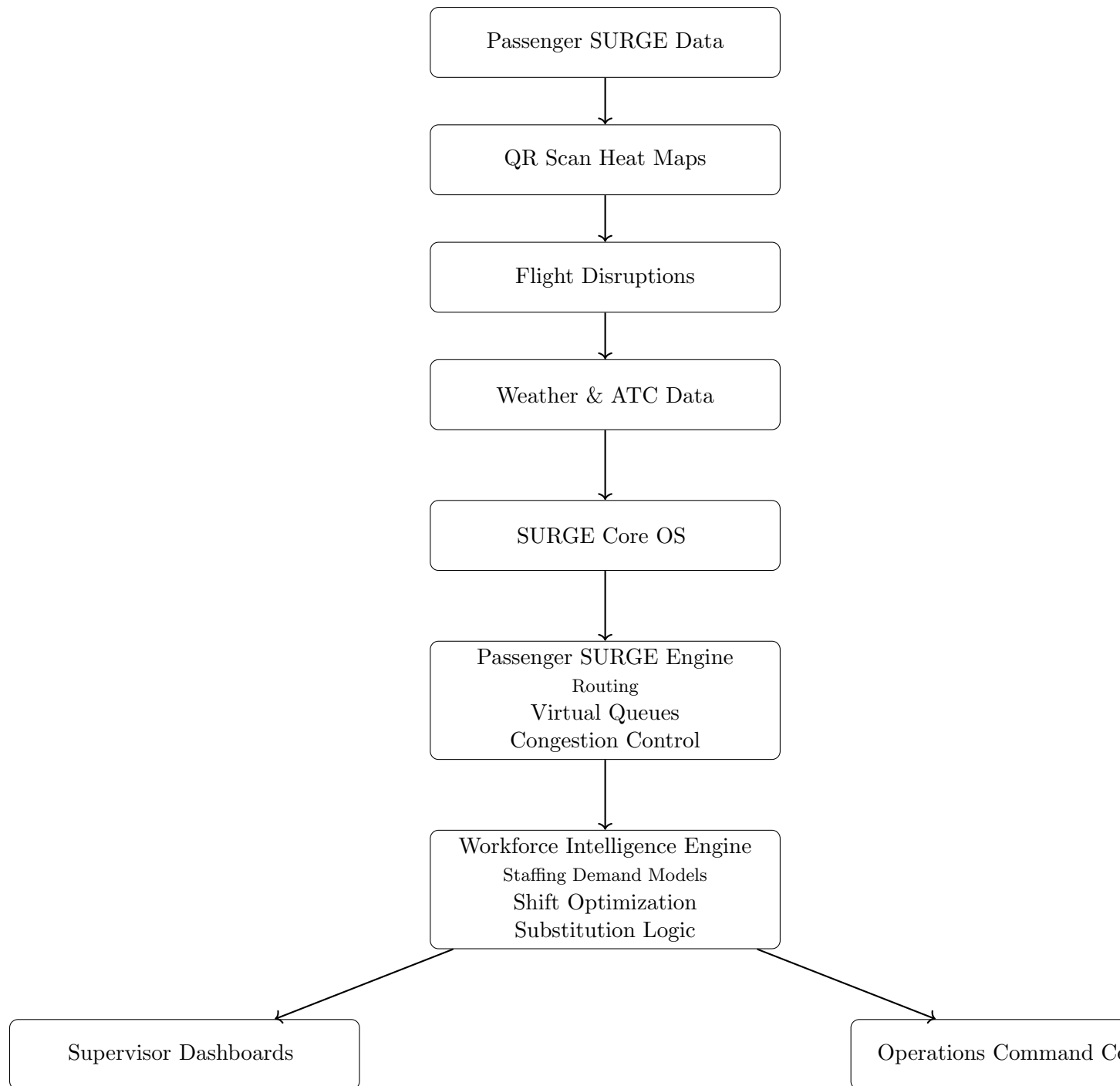
Introduction

This document presents two complementary system architecture diagrams for the SURGE (Digital, App-Free Traffic Coordination) system. Architecture 1 focuses on passenger flow and congestion orchestration. Architecture 2 presents the broader systems architecture integrating operational data and workforce intelligence.

Architecture 1: Passenger Flow and Congestion Orchestration



Architecture 2: Systems Architecture and Workforce Integration



Architecture 2 Explanation

Operational data sources are first aggregated and normalized before being processed by the SURGE Core OS. The Core OS coordinates both passenger flow decisions and workforce planning by passing

information sequentially through specialized engines. Final outputs are delivered to supervisors and operations staff, ensuring human oversight and manual control.