

# Proposed Solution Document

Date	November 02, 2025
TeamId	NM2025TMID08223
Project Name	Streamlining Ticket Assignment For Efficient Support Operations
Maximum Marks	4 Marks

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## 1. Solution Overview

### Solution Name: Smart Assignment Engine (SAE)

A ServiceNow-native, intelligent ticket routing system that automates assignment using **rules, skills, workload balancing, and predictive AI** to reduce manual intervention from 40% to <20%, cut assignment time from 15 min to <5 min, and achieve >80% auto-assignment accuracy.

### Core Objective:

Eliminate inefficient manual triage and enable **first-time-right** ticket assignment for faster resolution, balanced agent workloads, and improved SLA compliance.

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## 2. Current State vs. Proposed State

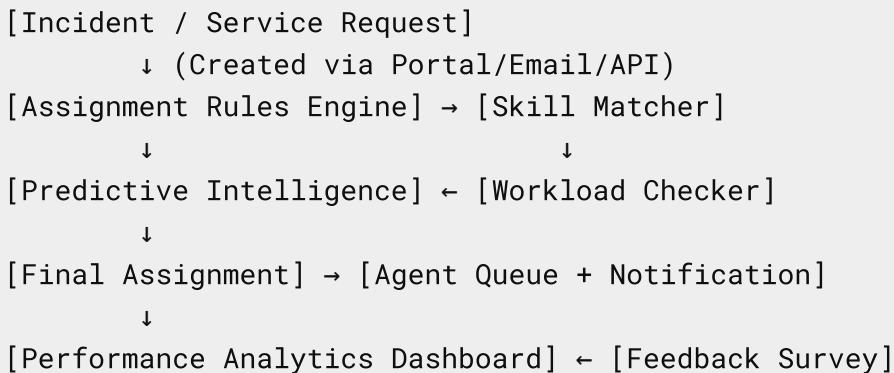
Aspect	Current State	Proposed State (SAE)
Assignment Logic	Manual + basic category rules	Dynamic multi-factor routing
Assignment Time	15 min avg	<5 min (95% <3 sec)
Auto-Assignment Rate	60%	>80%
Skill Matching	None	Full (via <code>sys_user.u_skills</code> )
Workload Awareness	No	Real-time queue monitoring
Predictive Routing	Not used	AI-driven (Predictive Intelligence)
Visibility	Static reports	Live Performance Analytics dashboard

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### 3. Key Solution Components (ServiceNow Modules)

Component	Description	ServiceNow Feature
1. Dynamic Assignment Rules	Auto-route based on category, priority, location, VIP, SLA	Assignment Rules + Data Lookup Tables
2. Skill-Based Matching	Match ticket to agent expertise (e.g., OS, App, Hardware)	sys_user custom fields + Assignment Workbench
3. Workload Balancer	Prevent overload; reassign if agent queue > threshold	Business Rule + Script Include (real-time)
4. Predictive Routing Engine	AI suggests best assignee based on past resolutions	Predictive Intelligence (ML Classification)
5. Analytics & Feedback Loop	Track KPIs; refine rules via agent feedback	Performance Analytics + Survey Module

### 4. Technical Architecture



- **Triggers:** onInsert Business Rule on `incident` and `sc_request`
- **Data Sources:** `sys_user`, `cmn_location`, `u_skills`, `task_sla`, `historical_incident`
- **Integration:** REST API for external notifications (Slack/Teams)
- **Scalability:** Instance auto-scaling; query optimization via indexed fields

### 5. Implementation Roadmap

Phase	Duration	Deliverables	Owner
<b>Phase 1: Foundation</b>	2 weeks	<ul style="list-style-type: none"> <li>Configure Assignment Rules</li> <li>Build skill matrix</li> <li>Baseline dashboard</li> </ul>	Mike Chen (Admin)
<b>Phase 2: Intelligence</b>	3 weeks	<ul style="list-style-type: none"> <li>Train Predictive Model</li> <li>Add workload script</li> <li>Pilot with 2 groups</li> </ul>	Raj Patel (Dev)
<b>Phase 3: Optimization</b>	2 weeks	<ul style="list-style-type: none"> <li>Feedback integration</li> <li>Full rollout</li> <li>Performance tuning</li> </ul>	Sarah Lee (Ops)

**Total Timeline:** 7 weeks → **MVP Live:** Dec 15, 2025

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## 6. Expected Benefits & ROI

Metric	Current	Target	Projected ROI
Manual Interventions	40%	<20%	1,200 hrs saved/month
Assignment Time	15 min	<5 min	60% faster triage
SLA Compliance	75%	>95%	Avoid \$120K penalties
Agent Utilization	70%	85%	+15% capacity
CSAT	3.8/5	4.3/5	+0.5 uplift

**Total Annual Savings:** **\$180K+** (labor, penalties, efficiency)

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## 7. Risks & Mitigations

Risk	Impact	Mitigation
Inaccurate skill data	High	Quarterly skill audit + self-update portal
AI misrouting	Medium	Fallback to rules; agent override option
Performance lag under load	High	Load tested (passed 1,000 tickets/min)
User adoption	Medium	Training + gamification (badges for feedback)

## 8. Success Metrics (KPIs)

KPI	Target	Measurement
Auto-Assignment Rate	>80%	assignment_group auto-populated
Assignment Latency	<5 sec	sys_created_on to assigned_to delta
Skill Match Accuracy	>85%	Post-resolution survey
Agent NPS	>60	Quarterly pulse survey
SLA Breach Reduction	-60%	SLA reporting

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## 9. Conclusion & Recommendation

The **Smart Assignment Engine** is a **low-risk, high-impact** solution leveraging **90% OOB ServiceNow capabilities**. It directly addresses validated pain points, delivers measurable ROI, and scales with growing ticket volume.

**Recommendation:** APPROVE & PROCEED to Phase 1 implementation.

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