Solution Requirements Document (SRD)

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

1. Document Purpose

This SRD defines **functional and non-functional requirements** for the **Smart Assignment Engine (SAE)** in ServiceNow. It serves as the single source of truth for development, testing, and validation.

2. Scope Summary

In-Scope:

- Auto-assignment of **Incident** and **Service Request** tickets
- Multi-layer routing: **Rules → Skills → Workload → Predictive AI**
- Real-time **Performance Analytics dashboard**
- **Notifications** and **feedback loop**

Out-of-Scope:

- Assignment of Change, Problem, or Knowledge tasks
- Full Virtual Agent integration
- External system routing (e.g., Jira, Salesforce)

3. Functional Requirements

ID	Requirement	Priority	Acceptance Criteria
FR-01	System shall auto-populate `assignment_group` and `assigned_to` on ticket creation	Must	80%+ tickets assigned without manual input
FR-02	Assignment Rules shall support conditions: `category`, `subcategory`, `priority`, `location`, `caller.vip`	Must	Configurable via OOB Assignment Rules UI
FR-03	Skill-based matching shall use `sys_user.u_skills` (multi-select) and map to ticket `u_required_skill`	Must	85%+ skill match rate in pilot
FR-04	Workload Balancer shall skip agents with `u_current_load > 15`	Should	Load recalculated on assign/close
FR-05	Predictive Intelligence shall suggest assignee based on historical resolution patterns	Should	Accuracy >80%; confidence threshold 70%
FR-06	Fallback logic: If no assignee found → round-robin within group	Must	No unassigned tickets >5 min
FR-07	System shall send real-time notification (Slack/Email) on assignment	Must	Delivered <10 sec; includes ticket link
FR-08	Performance Analytics dashboard shall display: Auto-Assignment %, Avg. Time, Top Skills, Agent Load	Must	Auto-refresh every 5 min
FR-09	Post-resolution survey shall trigger: "Was this ticket relevant to your skills?"	Could	Response rate >60%
FR-10	Agents shall self-update `u_skills` via Employee Center profile	Should	Audit trail enabled

4. Non-Functional Requirements

ID	Category	Requirement	Target	Verification
NFR-01	**Performance**	Assignment logic execution time	<3 sec (95th %)	JMeter load test
NFR-02	**Scalability**	Handle concurrent ticket creation	1,000/min	Stress test
NFR-03	**Availability**	System uptime	99.9%	Monitoring SLA
NFR-04	**Reliability**	Error rate in assignment	<0.5%	Log analysis
NFR-05	**Security**	Access to `u_skills` and scripts	`itil`, `assignment_admin` only	ACL testing

ID	Category	Requirement	Target	Verification
NFR-06	**Usability**	Dashboard intuitive for managers	>4/5 in UAT	User feedback
NFR-07	**Maintainability**	90% OOB, <10% custom scripts	Code review	Upgrade-safe
NFR-08	**Auditability**	Log `u_assignment_method` per ticket	100% coverage	Reporting
NFR-09	**Compliance**	GDPR: No PII in AI training	Anonymized data	Data scan
NFR-10	**Supportability**	Alert on auto-rate <75%	Real-time	Event Management

5. Data Requirements

Entity	Key Fields	Source	Update Frequency
`sys_user`	`u_skills`, `u_current_load`, `u_max_capacity`	HR sync + Self-service	Real-time
`incident` / `sc_request`	`u_required_skill`, `u_assignment_method`, `predicted_assignee`	SAE logic	On creation/update
`assignment_rule`	Conditions, `assign_to`	Admin UI	As needed
Predictive Model	Training dataset	Closed tickets (6+ months)	Monthly retrain

6. Interface Requirements

Interface	Type	Details
Email → Ticket	Inbound	Parse subject/body → auto-categorize
Slack/Teams	Outbound	Assignment notification via Integration Hub
Employee Center	UI	Skill self-update form
Performance Analytics	Reporting	PA Indicators + Widgets

7. Constraints & Assumptions

Constraints:

- Must run on **Vancouver release or later**
- **Predictive Intelligence** license required
- No custom tables; extend OOB only

Assumptions:

- Clean historical data available for AI training
- Agents will maintain accurate skill profiles
- Instance has sufficient compute for real-time scripts

8. Traceability Matrix (Sample)

Requirement ID	User Story	Test Case	Status
FR-01	Story 1	TC-001	Draft
FR-03	Story 1	TC-005	Draft
NFR-01	—	TC-PERF-01	Passed (Sandbox)

(Full matrix in Appendix)

9. Risks & Open Items

Risk	Impact	Mitigation
Incomplete skill data	High	Mandatory skill update during onboarding
AI model drift	Medium	Monthly retraining + fallback rules
Script performance	High	Optimize with GlideRecord queries