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PS02-ISTE: OpsAgent — Autonomous Operations Assistant for Small Businesses

CONTEXT

Small businesses form the backbone of the economy, yet most operate with limited staff, limited tools, and heavy dependence on the owner for daily decision-making. Owners must simultaneously manage inventory levels, staff schedules, supplier coordination, cash flow, and compliance requirements.

These operational activities are repetitive, interconnected, and time-sensitive. Tasks such as reordering stock, checking payments, and supplier follow-ups occur frequently. Decisions in one area affect another, for example inventory influencing cash flow or staffing affecting sales. Delays often result in shortages, financial loss, or customer dissatisfaction.

Currently, many businesses rely on spreadsheets, messaging apps, or manual intuition to handle operations. Small mistakes accumulate over time leading to missed reorders, inefficient staffing, disrupted supplier relationships, and operational stress. Owners spend more time reacting to issues than growing the business.

Although enterprise management systems exist, they are expensive, complex, and require constant configuration, making them unsuitable for small businesses. The core challenge is not the lack of data but the absence of continuous operational intelligence that can monitor, reason, and act proactively across daily activities.

CHALLENGE

Solution Design

Build an intelligent operational assistant platform where:

- The system continuously monitors business activities such as inventory, payments, and schedules.
- Routine operational decisions are automated or guided through recommendations.
- The platform predicts risks such as stock shortages, delayed payments, or staffing imbalance.
- Users receive proactive alerts and suggested actions before problems occur.
- The solution integrates simple inputs from existing tools like spreadsheets or messaging platforms.



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IMPORTANT NOTES

- The application must be simple and usable for non-technical business owners.
- The system should minimize manual data entry and configuration.
- Include features such as alerts, decision recommendations, and activity tracking.
- Focus on proactive assistance rather than passive reporting.

TECHNOLOGY BASELINE

Assume users have access to internet connectivity and basic digital tools such as smartphones, messaging platforms, and spreadsheets for operational inputs.

OUTCOME

A functional prototype that acts as an always-on operations assistant for small businesses. The system should detect operational issues before they become failures and automate routine decision-making processes.

It should reduce workload, improve efficiency, and allow business owners to focus on strategy, growth, and customer experience instead of daily operational firefighting.