

# MSP Analysis Report

<b>Query:</b>	what decision should I take for the betterment of the MSP ? Consider from the well being of technicians, customers, and the company.
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## Analysis Results

Here are strategic decisions for the betterment of your MSP, considering technicians, customers, and the company:

### ### Key Findings

- \* \*\*Significant Cost Optimization Opportunity:\*\* \$11,164.88 in annual savings from unused software licenses.
- \* \*\*Revenue Growth Potential:\*\* \$23,324.11 in potential annual revenue increase from proposed client price revisions.
- \* \*\*Immediate Financial Risk:\*\* \$2,155.00 in overdue payments from Pioneer Manufacturing (\$1,500.00) and GreenLeaf Organics (\$655.00).
- \* \*\*Customer Satisfaction Concerns:\*\* Five clients (EduGrowth Tutors, Creative Canvas Agency, Pioneer Manufacturing, Zenith Healthcare, GreenLeaf Organics) show negative "Happiness Adjustment" factors in their proposed price revisions.
- \* \*\*Security & Compliance Gaps:\*\* Anomalous software access by employees (e.g., Rohan Singh, Vikram Iyer, Sneha Patel) using tools not aligned with their roles.
- \* \*\*Critical Data Gaps:\*\* Key performance metrics related to technician well-being (e.g., employee satisfaction, resolution times) and customer experience (e.g., total resolved tickets, category breakdown) are unavailable due to agent execution errors.

### ### Financial Impact

- \* \*\*Cost Savings Opportunity:\*\* Reclaiming or canceling unused software licenses can yield \*\*\$11,164.88\*\* in annual savings.
- \* \*\*Revenue Enhancement Opportunity:\*\* Implementing proposed price revisions could increase annual revenue by \*\*\$23,324.11\*\*.
- \* \*\*Cash Flow Risk:\*\* Current overdue payments of \*\*\$2,155.00\*\* directly impact working capital.
- \* \*\*Hidden Churn Risk:\*\* Clients with negative "Happiness Adjustments" represent potential churn, especially if price increases are applied without addressing underlying dissatisfaction.

### ### Recommendations

1. \*\*Prioritize Financial Health & Cash Flow (Company):\*\*
- \* \*\*Collect Overdue Payments:\*\* Immediately follow up with Pioneer Manufacturing (\$1,500.00) and GreenLeaf Organics (\$655.00) to secure outstanding payments.
- \* \*\*Implement Proactive Payment Management:\*\* Establish stricter payment terms and automated reminders for upcoming invoices (e.g., Global Logistics Partners, Zenith Healthcare, EduGrowth Tutors)

due today).

2. \*\*Optimize Software Licenses for Savings & Security (Company & Technicians):\*\*

\* \*\*Reclaim/Cancel Unused Licenses:\*\* Actively recover the \*\*\$11,164.88\*\* in annual costs by reallocating or canceling licenses for software like SAP (\$2,500), Salesforce (\$1,800), Postman (\$1,188), and LinkedIn Sales Navigator (\$950).

\* \*\*Address Anomalous Access:\*\* Investigate and rectify instances of employees (e.g., Rohan Singh, Vikram Iyer) accessing software outside their typical roles to enhance security and compliance.

3. \*\*Strategically Manage Price Revisions & Customer Satisfaction (Customers & Company):\*\*

\* \*\*Address Happiness Adjustments:\*\* Before applying price increases, conduct proactive engagement with clients showing negative "Happiness Adjustments" (EduGrowth Tutors, Creative Canvas Agency, Pioneer Manufacturing, Zenith Healthcare, GreenLeaf Organics) to understand and resolve their concerns.

\* \*\*Transparent Communication:\*\* Clearly communicate the value proposition and the factors (e.g., base inflation, ticket volume) driving price adjustments to all clients.

4. \*\*Enhance Data Collection for Operational Insights (Technicians & Customers):\*\*

\* \*\*Resolve Agent Errors:\*\* Prioritize fixing the `MSP Insights Agent` and `Company Specific Ticket Agent` errors to unlock critical data on `active\_revenue`, `total\_resolved\_tickets`, `overall\_average\_resolution\_time\_hours`, `overall\_average\_employee\_satisfaction`, and `category\_breakdown`. This data is essential for informed decision-making regarding technician workload, training needs, and customer service improvements.

## Detailed Agent Data

### Msp Insights Agent

```
■■ Error executing pandas query: If using all scalar values, you must pass an index
Code: active_revenue = company_contract[company_contract['contract_status'] ==
'Active']['annual_revenue'].sum() technician_workload = technicians[['name',
'tickets_assigned']].copy() technician_workload.rename(columns={'name':
'technician_name', 'tickets_assigned': 'assigned_ticket_count'}, inplace=True) result =
{ 'total_annual_revenue_active_contracts': active_revenue,
'technician_workload_overview': technician_workload }
```

### Company Specific Ticket Agent

```
■■ Error executing pandas query: name 'category' is not defined Code:
total_resolved_tickets = company_analysis['resolved_tickets'].sum()
overall_average_resolution_time_hours =
company_analysis['average_resolution_time_hours'].mean()
overall_average_employee_satisfaction =
company_analysis['employee_satisfaction'].mean() allowed_categories = [ "Network
Connectivity Issue", "Hardware Failure", "Software Application Error", "Password
Reset", "VPN Access Problem", "Printer Issue", "Email & Collaboration Tool Issue",
"Permission & Access Request", "New User Setup", "Virus or Malware Concern", "Software
Installation Request", "General Inquiry" ] category_breakdown = {} for category in
allowed_categories: category_breakdown[f'total_tickets_{category.replace(" ", "_").replace("&", " and").lower()}'] = \
company_analysis['tickets_by_category'].apply(lambda x: x.get(category, 0)).sum()
aggregated_metrics = { 'total_resolved_tickets': total_resolved_tickets,
'overall_average_resolution_time_hours': overall_average_resolution_time_hours,
'overall_average_employee_satisfaction': overall_average_employee_satisfaction }
aggregated_metrics.update(category_breakdown) result = pd.Series(aggregated_metrics)
```

### License Audit Agent

Here's a summary of the flagged software instances, categorized by anomalous access and unused licenses, including their associated costs and reasons:

\*\*Summary of Flagged Software Instances\*\* The analysis identified a total of 40 flagged software instances across two categories: Anomalous Access and Unused Software Licenses. While anomalous access instances currently incur no direct cost, the unused software licenses represent a significant potential for cost optimization, totaling \*\*\$11,164.88\*\* in annual expenditures. Addressing these flags can enhance security posture and improve budget efficiency.

--- \*1. Flagged Anomalous Software Access (Total Cost: \$0.00)\* These instances indicate software access by employees whose roles are not typically associated with the software, potentially highlighting security or compliance concerns, even if the software itself is free.

- \* \*\*\*Employee Name:\*\* Rohan Singh, \*\*Software Name:\*\* MySQL Workbench, \*\*License Cost (USD):\*\* \$0.0, \*\*Reason:\*\* Role not typically allowed to use this software \*
- \* \*\*\*Employee Name:\*\* Vikram Iyer, \*\*Software Name:\*\* Docker (Free), \*\*License Cost (USD):\*\* \$0.0, \*\*Reason:\*\* Role not typically allowed to use this software \*
- \* \*\*\*Employee Name:\*\* Sneha Patel, \*\*Software Name:\*\* Slack (Free), \*\*License Cost (USD):\*\* \$0.0, \*\*Reason:\*\* Role not typically allowed to use this software --- \*2. Flagged Unused Software Licenses (Total Cost: \$11,164.88)\* These instances represent licenses assigned to employees but not actively utilized, indicating potential for cost savings through reallocation or cancellation.

- \* \*\*\*Employee Name:\*\* Rohan Singh, \*\*Software Name:\*\* MySQL Workbench, \*\*License Cost (USD):\*\* \$0.0, \*\*Reason:\*\* Not used in last 90 days \*
- \* \*\*\*Employee Name:\*\* Vikram Iyer, \*\*Software Name:\*\* Docker (Free), \*\*License Cost (USD):\*\* \$0.0, \*\*Reason:\*\* Never used \*
- \* \*\*\*Employee Name:\*\* Sneha Patel, \*\*Software Name:\*\* Slack (Free), \*\*License Cost (USD):\*\* \$0.0, \*\*Reason:\*\* Never used \*
- \* \*\*\*Employee Name:\*\* Amit Verma, \*\*Software Name:\*\* QuickBooks, \*\*License Cost (USD):\*\* \$360.0, \*\*Reason:\*\* Never used \*
- \* \*\*\*Employee Name:\*\* Priya Reddy, \*\*Software Name:\*\* Google Analytics, \*\*License Cost (USD):\*\* \$0.0, \*\*Reason:\*\* Never used \*
- \* \*\*\*Employee Name:\*\* Priya Reddy, \*\*Software Name:\*\* Canva, \*\*License Cost (USD):\*\* \$180.0, \*\*Reason:\*\* Never used \*
- \* \*\*\*Employee Name:\*\* Karan Gupta, \*\*Software Name:\*\* GitHub, \*\*License Cost (USD):\*\* \$48.0, \*\*Reason:\*\* Never used \*
- \* \*\*\*Employee Name:\*\* Karan Gupta, \*\*Software Name:\*\* Jira, \*\*License Cost (USD):\*\* \$93.0, \*\*Reason:\*\* Never used \*
- \* \*\*\*Employee Name:\*\* Karan Gupta, \*\*Software Name:\*\* Figma, \*\*License Cost (USD):\*\* \$144.0, \*\*Reason:\*\* Never used \*
- \* \*\*\*Employee Name:\*\* Meera Desai, \*\*Software Name:\*\* Confluence, \*\*License Cost (USD):\*\* \$66.0, \*\*Reason:\*\* Never used \*
- \* \*\*\*Employee Name:\*\* Meera Desai, \*\*Software Name:\*\* Miro, \*\*License Cost (USD):\*\* \$192.0, \*\*Reason:\*\* Never used \*
- \* \*\*\*Employee Name:\*\* Arjun Mehta, \*\*Software Name:\*\* LinkedIn Sales Navigator, \*\*License Cost (USD):\*\* \$11,164.88, \*\*Reason:\*\* Never used \*

\*\*License Cost (USD):\*\* \$950.0, \*\*Reason:\*\* Never used \* \*\*Employee Name:\*\* Arjun Mehta,  
 \*\*Software Name:\*\* Microsoft Excel, \*\*License Cost (USD):\*\* \$150.0, \*\*Reason:\*\* Never  
 used \* \*\*Employee Name:\*\* Divya Rao, \*\*Software Name:\*\* Tableau, \*\*License Cost (USD):\*\*  
 \$840.0, \*\*Reason:\*\* Never used \* \*\*Employee Name:\*\* Divya Rao, \*\*Software Name:\*\* AWS  
 Sagemaker, \*\*License Cost (USD):\*\* \$0.0, \*\*Reason:\*\* Never used \* \*\*Employee Name:\*\*  
 Sameer Khan, \*\*Software Name:\*\* Microsoft 365 Admin, \*\*License Cost (USD):\*\* \$0.0,  
 \*\*Reason:\*\* Never used \* \*\*Employee Name:\*\* Sameer Khan, \*\*Software Name:\*\* Norton  
 Antivirus, \*\*License Cost (USD):\*\* \$50.0, \*\*Reason:\*\* Never used \* \*\*Employee Name:\*\*  
 Fatima Ansari, \*\*Software Name:\*\* Adobe Photoshop, \*\*License Cost (USD):\*\* \$251.88,  
 \*\*Reason:\*\* Never used \* \*\*Employee Name:\*\* Fatima Ansari, \*\*Software Name:\*\* Canva,  
 \*\*License Cost (USD):\*\* \$180.0, \*\*Reason:\*\* Never used \* \*\*Employee Name:\*\* Rahul Nair,  
 \*\*Software Name:\*\* Kubernetes, \*\*License Cost (USD):\*\* \$0.0, \*\*Reason:\*\* Never used \*  
 \*\*Employee Name:\*\* Rahul Nair, \*\*Software Name:\*\* Jenkins, \*\*License Cost (USD):\*\*  
 \$0.0, \*\*Reason:\*\* Never used \* \*\*Employee Name:\*\* Rahul Nair, \*\*Software Name:\*\*  
 Terraform, \*\*License Cost (USD):\*\* \$240.0, \*\*Reason:\*\* Never used \* \*\*Employee Name:\*\*  
 Sunita Joshi, \*\*Software Name:\*\* Microsoft Excel, \*\*License Cost (USD):\*\* \$150.0,  
 \*\*Reason:\*\* Never used \* \*\*Employee Name:\*\* Sunita Joshi, \*\*Software Name:\*\* SAP,  
 \*\*License Cost (USD):\*\* \$2500.0, \*\*Reason:\*\* Never used \* \*\*Employee Name:\*\* Naveen  
 Kumar, \*\*Software Name:\*\* Microsoft Excel, \*\*License Cost (USD):\*\* \$150.0, \*\*Reason:\*\*  
 Never used \* \*\*Employee Name:\*\* Naveen Kumar, \*\*Software Name:\*\* PowerBI, \*\*License Cost  
 (USD):\*\* \$120.0, \*\*Reason:\*\* Never used \* \*\*Employee Name:\*\* Pooja Chavan, \*\*Software  
 Name:\*\* BambooHR, \*\*License Cost (USD):\*\* \$99.0, \*\*Reason:\*\* Never used \* \*\*Employee  
 Name:\*\* Pooja Chavan, \*\*Software Name:\*\* Slack, \*\*License Cost (USD):\*\* \$87.0,  
 \*\*Reason:\*\* Never used \* \*\*Employee Name:\*\* Harish Patil, \*\*Software Name:\*\* Grammarly,  
 \*\*License Cost (USD):\*\* \$144.0, \*\*Reason:\*\* Never used \* \*\*Employee Name:\*\* Harish  
 Patil, \*\*Software Name:\*\* WordPress, \*\*License Cost (USD):\*\* \$300.0, \*\*Reason:\*\* Never  
 used \* \*\*Employee Name:\*\* Lakshmi Menon, \*\*Software Name:\*\* Jira, \*\*License Cost  
 (USD):\*\* \$93.0, \*\*Reason:\*\* Never used \* \*\*Employee Name:\*\* Lakshmi Menon, \*\*Software  
 Name:\*\* Figma, \*\*License Cost (USD):\*\* \$144.0, \*\*Reason:\*\* Never used \* \*\*Employee  
 Name:\*\* Alok Tiwari, \*\*Software Name:\*\* Jira, \*\*License Cost (USD):\*\* \$93.0,  
 \*\*Reason:\*\* Never used \* \*\*Employee Name:\*\* Alok Tiwari, \*\*Software Name:\*\* Postman,  
 \*\*License Cost (USD):\*\* \$1188.0, \*\*Reason:\*\* Never used \* \*\*Employee Name:\*\* Alok  
 Tiwari, \*\*Software Name:\*\* TestRail, \*\*License Cost (USD):\*\* \$372.0, \*\*Reason:\*\* Never  
 used \* \*\*Employee Name:\*\* Ritu Agarwal, \*\*Software Name:\*\* Salesforce, \*\*License Cost  
 (USD):\*\* \$1800.0, \*\*Reason:\*\* Never used \* \*\*Employee Name:\*\* Ritu Agarwal, \*\*Software  
 Name:\*\* Microsoft Teams, \*\*License Cost (USD):\*\* \$60.0, \*\*Reason:\*\* Never used

## Financial Agent

Here's a summary of the current payment statuses and proposed annual price revisions  
 across your client base: \*\*Summary of Payment Statuses:\*\* \* \*\*Overdue Payments:\*\* Two  
 clients currently have overdue payments totaling \$2,155.00. \* \*\*Pioneer  
 Manufacturing:\*\* \$1,500.00, due 2025-10-15, 15 days overdue. \* \*\*GreenLeaf Organics:\*\*  
 \$655.00, due 2025-10-20, 10 days overdue. \* \*\*Delayed Payments:\*\* One client made a  
 payment that was delayed, incurring a penalty. \* \*\*Starlight Hotels Group:\*\* Paid  
 \$750.00 for an invoice due 2025-10-21, with a 7-day delay and a penalty applied of  
 \$3.46. \* \*\*Upcoming Pending Invoices:\*\* Three clients have invoices pending for today,  
 2025-10-31, totaling \$3,714.00. \* \*\*Global Logistics Partners:\*\* \$1,000.00, due  
 2025-10-31 (0 days until due). \* \*\*Zenith Healthcare:\*\* \$2,100.00, due 2025-10-31 (0  
 days until due). \* \*\*EduGrowth Tutors:\*\* \$614.00, due 2025-10-31 (0 days until due).  
 \*\*Proposed Annual Price Revisions:\*\* Here are the proposed annual price revisions for  
 clients, including detailed factor breakdowns and projected cost changes: \* \*\*EduGrowth  
 Tutors:\*\* \* \*\*Current Monthly Cost:\*\* \$614.00 \* \*\*Revised Monthly Cost:\*\* \$741.40 \*  
 \*\*Annual Cost Change:\*\* \$1,528.86 \* \*\*Revision Percentage:\*\* 20.75% \* \*\*Factor  
 Breakdown:\*\* Base Inflation (6.00%), Ticket Volume Impact (15.00%), Endpoint Scale  
 Impact (0.50%), Payment Delay Penalty (0.00%), Happiness Adjustment (-0.75%), Contract  
 Length Discount (0.00%) \* \*\*Innovatech Solutions Pvt. Ltd.:\*\* \* \*\*Current Monthly Cost:\*\*  
 \$3,250.00 \* \*\*Revised Monthly Cost:\*\* \$3,810.62 \* \*\*Annual Cost Change:\*\* \$6,727.50 \*  
 \*\*Revision Percentage:\*\* 17.25% \* \*\*Factor Breakdown:\*\* Base Inflation (6.00%), Ticket  
 Volume Impact (15.00%), Endpoint Scale Impact (0.50%), Payment Delay Penalty (0.00%),  
 Happiness Adjustment (0.75%), Contract Length Discount (5.00%) \* \*\*Starlight Hotels  
 Group:\*\* \* \*\*Current Monthly Cost:\*\* \$750.00 \* \*\*Revised Monthly Cost:\*\* \$877.22 \*  
 \*\*Annual Cost Change:\*\* \$1,526.58 \* \*\*Revision Percentage:\*\* 16.96% \* \*\*Factor  
 Breakdown:\*\* Base Inflation (6.00%), Ticket Volume Impact (15.00%), Endpoint Scale  
 Impact (0.50%), Payment Delay Penalty (0.46%), Happiness Adjustment (0.00%), Contract  
 Length Discount (5.00%) \* \*\*Global Logistics Partners:\*\* \* \*\*Current Monthly Cost:\*\*  
 \$1,000.00 \* \*\*Revised Monthly Cost:\*\* \$1,165.00 \* \*\*Annual Cost Change:\*\* \$1,980.00 \*  
 \*\*Revision Percentage:\*\* 16.50% \* \*\*Factor Breakdown:\*\* Base Inflation (6.00%), Ticket  
 Volume Impact (15.00%), Endpoint Scale Impact (0.50%), Payment Delay Penalty (0.00%),  
 Happiness Adjustment (0.00%), Contract Length Discount (5.00%) \* \*\*Quantum Financial  
 Services:\*\* \* \*\*Current Monthly Cost:\*\* \$1,149.00 \* \*\*Revised Monthly Cost:\*\* \$1,338.59 \*  
 \*\*Annual Cost Change:\*\* \$2,275.02 \* \*\*Revision Percentage:\*\* 16.50% \* \*\*Factor  
 Breakdown:\*\* Base Inflation (6.00%), Ticket Volume Impact (15.00%), Endpoint Scale  
 Impact (0.50%), Payment Delay Penalty (0.00%), Happiness Adjustment (0.00%), Contract  
 Length Discount (5.00%) \* \*\*Apex Construction:\*\* \* \*\*Current Monthly Cost:\*\* \$900.00 \*  
 \*\*Revised Monthly Cost:\*\* \$1,048.50 \* \*\*Annual Cost Change:\*\* \$1,782.00 \* \*\*Revision\*\*

Percentage:\*\* 16.50% \* \*\*Factor Breakdown:\*\* Base Inflation (6.00%), Ticket Volume Impact (15.00%), Endpoint Scale Impact (0.50%), Payment Delay Penalty (0.00%), Happiness Adjustment (0.00%), Contract Length Discount (5.00%) \* \*\*Creative Canvas Agency\*\* \* \*\*Current Monthly Cost:\*\* \$800.00 \* \*\*Revised Monthly Cost:\*\* \$928.40 \* \*\*Annual Cost Change:\*\* \$1,540.80 \* \*\*Revision Percentage:\*\* 16.05% \* \*\*Factor Breakdown:\*\* Base Inflation (6.00%), Ticket Volume Impact (15.00%), Endpoint Scale Impact (0.50%), Payment Delay Penalty (0.00%), Happiness Adjustment (-0.45%), Contract Length Discount (5.00%) \* \*\*Pioneer Manufacturing\*\* \* \*\*Current Monthly Cost:\*\* \$1,500.00 \* \*\*Revised Monthly Cost:\*\* \$1,736.25 \* \*\*Annual Cost Change:\*\* \$2,835.00 \* \*\*Revision Percentage:\*\* 15.75% \* \*\*Factor Breakdown:\*\* Base Inflation (6.00%), Ticket Volume Impact (15.00%), Endpoint Scale Impact (0.50%), Payment Delay Penalty (0.00%), Happiness Adjustment (-0.50%), Contract Length Discount (5.00%) \* \*\*Zenith Healthcare\*\* \* \*\*Current Monthly Cost:\*\* \$2,100.00 \* \*\*Revised Monthly Cost:\*\* \$2,430.75 \* \*\*Annual Cost Change:\*\* \$3,969.00 \* \*\*Revision Percentage:\*\* 15.75% \* \*\*Factor Breakdown:\*\* Base Inflation (6.00%), Ticket Volume Impact (15.00%), Endpoint Scale Impact (0.50%), Payment Delay Penalty (0.00%), Happiness Adjustment (-0.75%), Contract Length Discount (5.00%) \* \*\*GreenLeaf Organics\*\* \* \*\*Current Monthly Cost:\*\* \$655.00 \* \*\*Revised Monthly Cost:\*\* \$751.61 \* \*\*Annual Cost Change:\*\* \$1,159.35 \* \*\*Revision Percentage:\*\* 14.75% \* \*\*Factor Breakdown:\*\* Base Inflation (6.00%), Ticket Volume Impact (12.00%), Endpoint Scale Impact (0.50%), Payment Delay Penalty (0.00%), Happiness Adjustment (-0.75%), Contract Length Discount (3.00%)