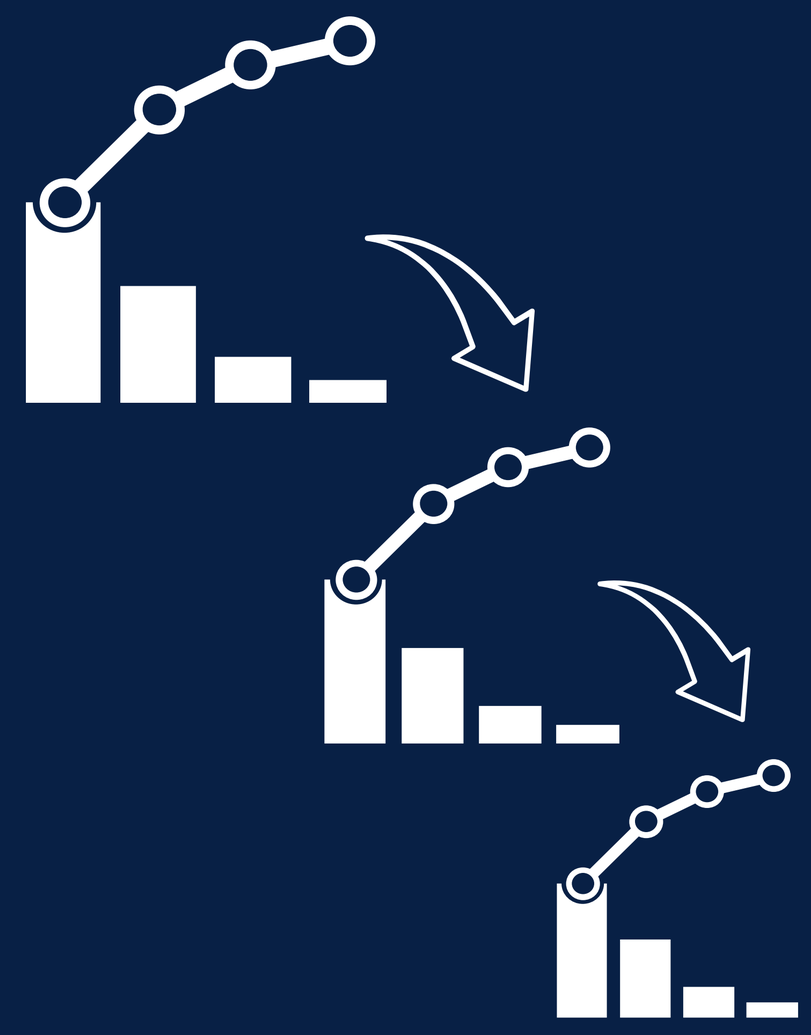


"Focus on the few that matter,
and you'll move mountains."

Uncovering Vital Factors: **The Power of Pareto Drilldown for Data Analysts & Decision Makers**

“Things which matter most must never be at the mercy of things which matter least.”
— Johann Wolfgang von Goethe

When data feels overwhelming, finding the vital factors becomes a challenge.

In this document we’ll discuss a method to systematically uncover those critical factors.

Using Pareto Drilldown, data analysts can transform scattered data into actionable insights, pinpointing the root causes with precision.

What follows is a description of the Pareto Drilldown with examples. Examples are taken from the following environements:

- **Digital**
- **Services**
- **Financial**

Power of the Pareto Drilldown

Pareto Drilldown simplifies complex data, making it manageable and actionable.

By focusing on the most significant factors, it ensures efficient use of resources.

The iterative nature of the process allows for deep insights, often revealing hidden causes.

This method is crucial for data analysts aiming to make impactful decisions.

Start with High-Level Analysis

Gather all data related to the issue at hand.

Construct a Pareto chart to highlight the main categories (factors) contributing to the problem.

The 80/20 rule: Often, 20% of the causes contribute to 80% of the problem.

This first step will reveal the key categories to focus on.

Drill Down into Key Categories

- Break down the top contributors from your first chart into more specific subcategories.
- Use a new Pareto chart for each category (e.g., Product Quality, Defective Items, Incorrect Orders).
- Keep drilling down until you reach a granular level that reveals actionable insights.
- Each drilldown gets you closer to identifying the true vital factor or root cause.

Identify Vital Factors

Analyse the final level of your Pareto charts to discover the most critical factors.

These root causes are the ones that consistently appear across multiple levels.

Prioritise these factors as they hold the key to answering your questions.

Addressing the “vital few” can have a massive impact on solving the problem.

Present Findings and Recommend Solutions

- Clearly present the series of Pareto charts, showing the progression of your analysis.
- Highlight how each step has narrowed down the problem to its root causes.
- Recommend specific, targeted actions to address these critical factors.
- Ensure your recommendations are actionable and focus on the highest impact areas.

Examples

- **Transactional, Digital, and Services Environment**
- **Uncovering Vital Factors in a Service Environment**
- **Uncovering Vital Factors in Finance Process**

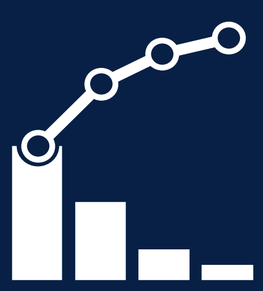
Transactional, Digital, and Services Environment

Scenario: An online retail platform is experiencing a significant increase in customer churn rates, and management wants to identify the root causes to improve customer retention.

<u>High-Level Pareto Chart</u>

Identify Key Categories: The first Pareto chart categorizes the reasons for customer churn into broad categories such as "Website Performance Issues," "Product Availability," "Customer Support Experience," and "Pricing Competitiveness."

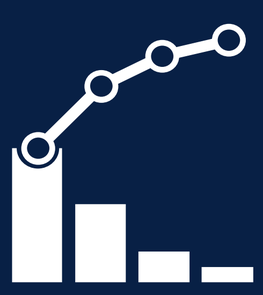
Result: The chart shows that "Website Performance Issues" and "Customer Support Experience" account for 75% of the churn reasons.



<u>Drill Down into "Website Performance Issues"</u>

Subcategories: The next Pareto chart breaks down "Website Performance Issues" into more specific issues like "Page Load Speed," "Checkout Failures," "Mobile Responsiveness," and "Navigation Problems."

Result: "Page Load Speed" and "Checkout Failures" are identified as the leading contributors to website performance-related churn.



<u>Drill Down into "Customer Support Experience"</u>

Subcategories: Simultaneously, another Pareto chart is created for "Customer Support Experience," breaking it down into "Response Time," "Resolution Quality," "Agent Politeness," and "Support Channel Availability."

Result: The chart reveals that "Response Time" and "Resolution Quality" are the main factors driving customer dissatisfaction with support.

Further Drill Down into “Page Load Speed”
Subcategories: The next step involves analyzing “Page Load Speed” more deeply, looking at issues such as “High Traffic Periods,” “Server Performance,” “Heavy Page Elements,” and “Third-Party Integrations.”

Result: The data shows that “High Traffic Periods” combined with “Heavy Page Elements” are the root causes of slow page load speeds.

Further Drill Down into “Response Time” in Customer Support
Subcategories: For “Response Time,” the drill down might focus on “Staffing Levels,” “Support Ticket Prioritization,” “Automated Responses,” and “Time Zone Coverage.”

Result: “Staffing Levels” during peak hours and inadequate “Time Zone Coverage” are identified as root causes for slow response times in customer support.

Vital Factors Identification

1. Website Performance:
The root cause analysis for website performance issues reveals that the combination of high traffic periods and heavy page elements is significantly slowing down the page load times, contributing to customer frustration and churn.

2. Customer Support:
The root cause analysis for customer support shows that inadequate staffing during peak hours and poor coverage in certain time zones are leading to slow response times and poor resolution quality, driving customers away.

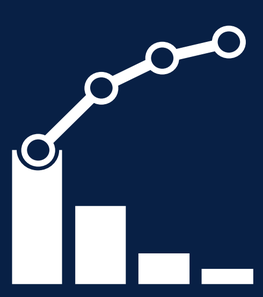
Uncovering Vital Factors in a Service Environment

Scenario: A healthcare clinic is facing a high rate of patient dissatisfaction, reflected in negative feedback and low return visits. Management wants to identify the root causes to enhance patient experience and retention.

<u>High-Level Pareto Chart</u>

Identify Key Categories: The first Pareto chart categorizes the sources of patient dissatisfaction into broad categories such as "Appointment Scheduling Issues," "Wait Times," "Staff Attitude," and "Billing Errors."

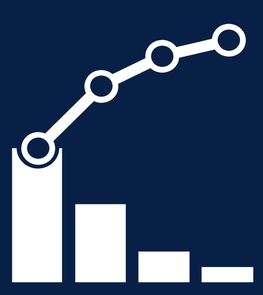
Result: The chart shows that "Wait Times" and "Appointment Scheduling Issues" account for 80% of the dissatisfaction.



<u>Drill Down into "Wait Times"</u>

Subcategories: The next Pareto chart breaks down "Wait Times" into more specific issues like "Delays with Doctors," "Overbooking," "Late Arrivals," and "Emergency Cases."

Result: "Delays with Doctors" and "Overbooking" are identified as the leading contributors to long wait times.



<u>Drill Down into "Appointment Scheduling Issues"</u>

Subcategories: Simultaneously, another Pareto chart is created for "Appointment Scheduling Issues," breaking it down into "Difficulty in Getting Appointments," "Long Lead Times," "Scheduling Errors," and "Lack of Available Slots."

Result: The chart reveals that "Difficulty in Getting Appointments" and "Long Lead Times" are the main factors driving patient dissatisfaction with scheduling.

<u>Further Drill Down into “Delays with Doctors”</u>
Subcategories: The next step involves analyzing “Delays with Doctors” more deeply, looking at factors such as “Overbooked Schedules,” “Unanticipated Extended Consultations,” “Administrative Burdens on Doctors,” and “Lack of Backup Staff.”

Result: The data shows that “Overbooked Schedules” and “Unanticipated Extended Consultations” are the root causes of delays with doctors.

<u>Further Drill Down into “Difficulty in Getting Appointments”</u>
Subcategories: For “Difficulty in Getting Appointments,” the drill down might focus on “Limited Operating Hours,” “High Demand for Certain Specialists,” “Inefficient Appointment System,” and “Lack of Online Booking Options.”

Result: “High Demand for Certain Specialists” and an “Inefficient Appointment System” are identified as the root causes of scheduling issues.times in customer support.

<u>Vital Factors Identification</u>

1. Wait Times:
The root cause analysis for wait times reveals that the overbooking of doctors’ schedules and the occurrence of unanticipated extended consultations are the primary drivers of delays, leading to patient frustration and dissatisfaction.

2. Appointment Scheduling:
The root cause analysis for appointment scheduling issues shows that the high demand for certain specialists and the inefficient appointment system are causing difficulties in securing timely appointments, further contributing to patient dissatisfaction.

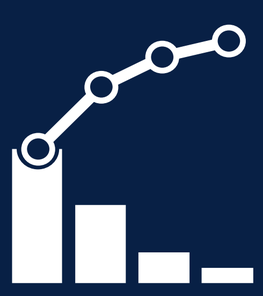
Uncovering Vital Factors in Finance Process

Scenario: A financial services company is experiencing an increase in payment processing delays, leading to client complaints and potential financial penalties. Management wants to identify the root causes to streamline the payment process and improve client satisfaction.

<u>High-Level Pareto Chart</u>

Identify Key Categories: The first Pareto chart categorizes the reasons for payment processing delays into broad categories such as "Technical Issues," "Data Entry Errors," "Approval Delays," and "Compliance Hold-Ups."

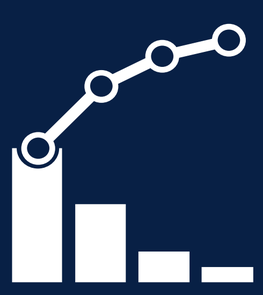
Result: The chart shows that "Technical Issues" and "Approval Delays" account for 70% of the processing delays.



<u>Drill Down into "Technical Issues"</u>

Subcategories: The next Pareto chart breaks down "Technical Issues" into more specific problems such as "System Downtime," "Software Bugs," "Integration Failures," and "Network Latency."

Result: "System Downtime" and "Software Bugs" are identified as the leading contributors to technical delays in payment processing.



<u>Drill Down into "Approval Delays"</u>

Subcategories: Simultaneously, another Pareto chart is created for "Approval Delays," breaking it down into "Manager Unavailability," "Complex Approval Chains," "Incomplete Documentation," and "Manual Review Requirements."

Result: The chart reveals that "Manager Unavailability" and "Complex Approval Chains" are the main factors driving delays in obtaining necessary approvals.

Further Drill Down into “System Downtime”
Subcategories: The next step involves analyzing “System Downtime” more deeply, looking at factors such as “Scheduled Maintenance,” “Unexpected Outages,” “Server Capacity Issues,” and “Software Updates.”

Result: The data shows that “Unexpected Outages” and “Server Capacity Issues” are the root causes of system downtime, which leads to payment processing delays.

Further Drill Down into “Manager Unavailability”
Subcategories: For “Manager Unavailability,” the drill down might focus on “Overloaded Schedules,” “Lack of Backup Approvers,” “Time Zone Differences,” and “Unclear Escalation Procedures.”

Result: “Overloaded Schedules” and “Lack of Backup Approvers” are identified as the root causes of delays in obtaining approvals due to manager unavailability.

Vital Factors Identification

1. Technical Issues:
The root cause analysis for technical issues reveals that unexpected system outages and server capacity limitations are the primary drivers of payment processing delays due to technical failures.

2. Approval Delays:
The root cause analysis for approval delays shows that overloaded schedules of key managers and the lack of backup approvers are causing bottlenecks in the approval process, further contributing to payment delays.

Key Takeaways

- Pareto Drilldown is a systematic approach to identify key factors or root causes.
- It helps focus on the “vital few” that truly matter.
- Each level of drilldown adds precision and clarity to the analysis.
- Use this method to convert overwhelming data into clear, actionable steps.

Reminder

Start broad, then narrow down.

Prioritise the few factors that have the biggest impact.

Communicate your findings clearly.

Always look for actionable insights.

Continuous refinement is key—never stop at the first drilldown.

Sometimes, the simplest tools bring the greatest insights. Pareto Drilldown might be the breakthrough you need.

Uncovering the real problem is often the hardest part of data analysis.

Need assiatance with finding the vital factors in your business? We're stand ready to help.

What's your biggest challenge when identifying root causes?
Share your thoughts?

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