

# Supply Chain Analytics



## Overview

---

Introduction page of the dashboard, providing access to the different sections of the report.

## Supplier Selection

Analysis of supplier quotes and calculation of extended and full costs for the volumes defined in the quotes, in order to identify the lowest-cost supplier per part number.

## Scenatrio Planner

Dynamic analysis tool enabling simulation of full costs across a wide range of production volumes, to anticipate the impact of order volume variations on supplier selection.

## Make versus Buy

Comparison between in-house manufacturing and external purchasing, incorporating machine capacity data and internal cost estimates, to guide strategic sourcing decisions.

## Data & Definitions

Presentation of the report's methodological framework, data sources, and key indicators. This page also allows exporting data from each visual in .csv or .xlsx format.

# Supplier Selection

Volume

All

Part Number

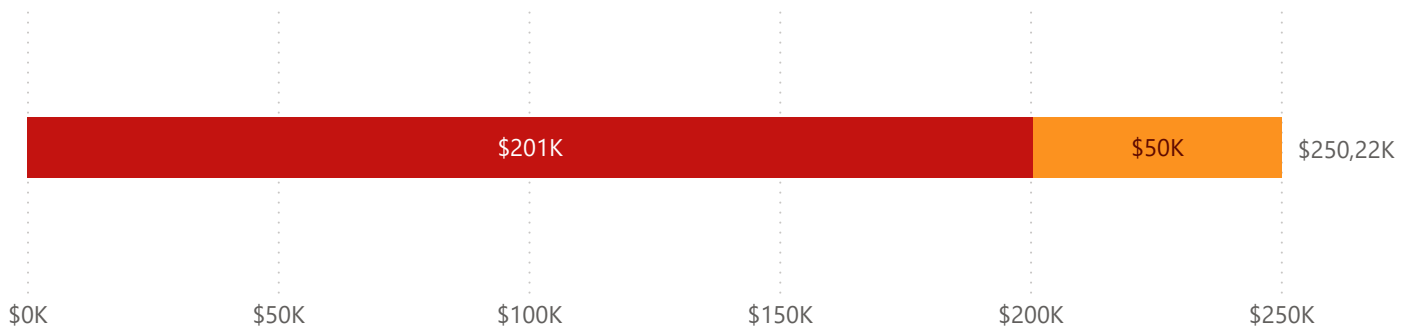
P0706

Lowest Cost Supplier

## Ringo Nova

### Cost Breakdown

● Total of Extended Cost ● Total of Non Recurring Expenses

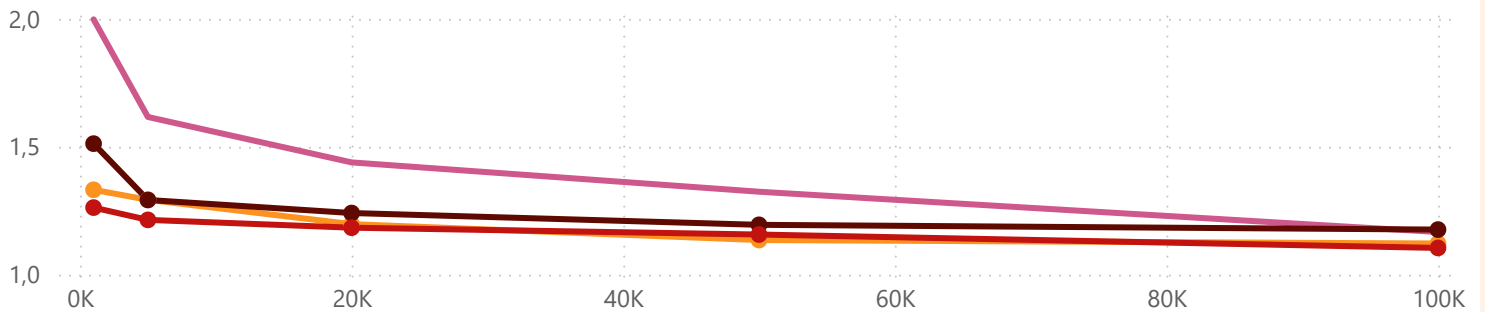


### Unit Cost by Volume and Supplier

Supplier ● Expellio ● Ringo Nova ● UCell, We Make ● Widgetmakers, Inc

Non Recurring Expenses

Unit Cost



| Supplier          | Part Number | Volume | Non Recurring Expenses | Unit Cost | Full Cost   |
|-------------------|-------------|--------|------------------------|-----------|-------------|
| Expellio          | P0706       | 1000   | \$2 938,57             | \$2,00    | \$4 936,64  |
| Ringo Nova        | P0706       | 1000   | \$3 188,61             | \$1,33    | \$4 520,25  |
| UCell, We Make    | P0706       | 1000   | \$2 373,92             | \$1,51    | \$3 885,90  |
| Widgetmakers, Inc | P0706       | 1000   | \$3 088,36             | \$1,26    | \$4 350,37  |
| Expellio          | P0706       | 5000   | \$20 938,57            | \$1,62    | \$29 019,86 |
| Ringo Nova        | P0706       | 5000   | \$6 594,31             | \$1,29    | \$13 055,79 |
| UCell, We         | P0706       | 5000   | \$11 186,96            | \$1,29    | \$17 645,97 |

# Scenario Planner

## Scenario Volume

25000



## Part Number

All

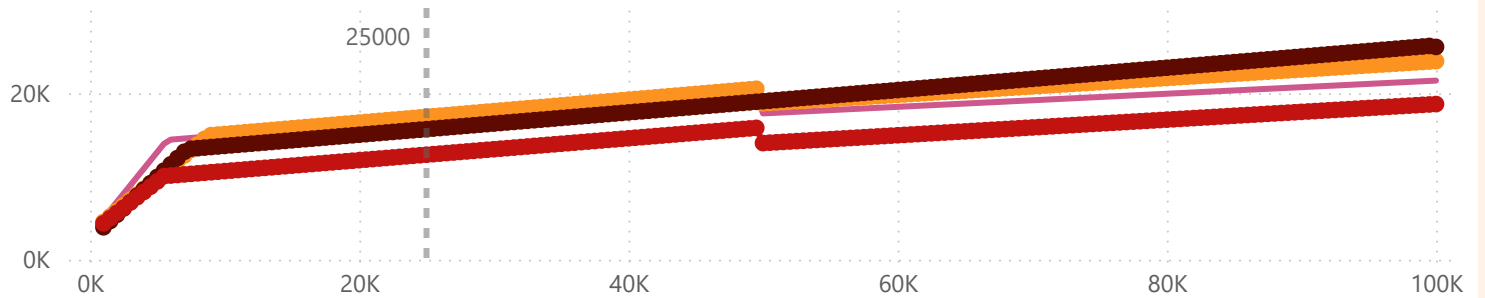


Total of Non Recurring Expenses

**\$9,32K**

## Buy Scenario by Scenario Volume and Supplier

Supplier ● Expellio ● Ringo Nova ● UCell, We Make ● Widgetmakers, Inc

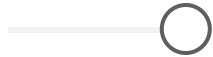


| Supplier          | Part_Number | Buy Scenario Full Cost |
|-------------------|-------------|------------------------|
| Widgetmakers, Inc | P1010       | \$1 560 816,99         |
| Ringo Nova        | P0604       | \$1 439 021,66         |
| Widgetmakers, Inc | P0604       | \$1 337 048,82         |
| UCell, We Make    | P1010       | \$1 235 201,47         |
| UCell, We Make    | P0604       | \$1 226 444,51         |
| Widgetmakers, Inc | P0622       | \$1 157 173,39         |
| UCell, We Make    | P0914       | \$1 019 110,91         |
| Ringo Nova        | P1010       | \$895 506,38           |
| Widgetmakers, Inc | P9091       | \$584 872,81           |
| UCell, We Make    | P1227       | \$545 948,60           |
| Ringo Nova        | P9091       | \$544 664,51           |
| Widgetmakers, Inc | P1227       | \$538 033,52           |
| Ringo Nova        | P0622       | \$534 398,38           |
| Widgetmakers, Inc | P0914       | \$371 740,41           |
| UCell, We Make    | P9091       | \$367 481,51           |
| UCell, We Make    | P0622       | \$306 100,97           |
| Ringo Nova        | P1227       | \$271 691,83           |

# Make versus Buy

## Scenario Volume

91500



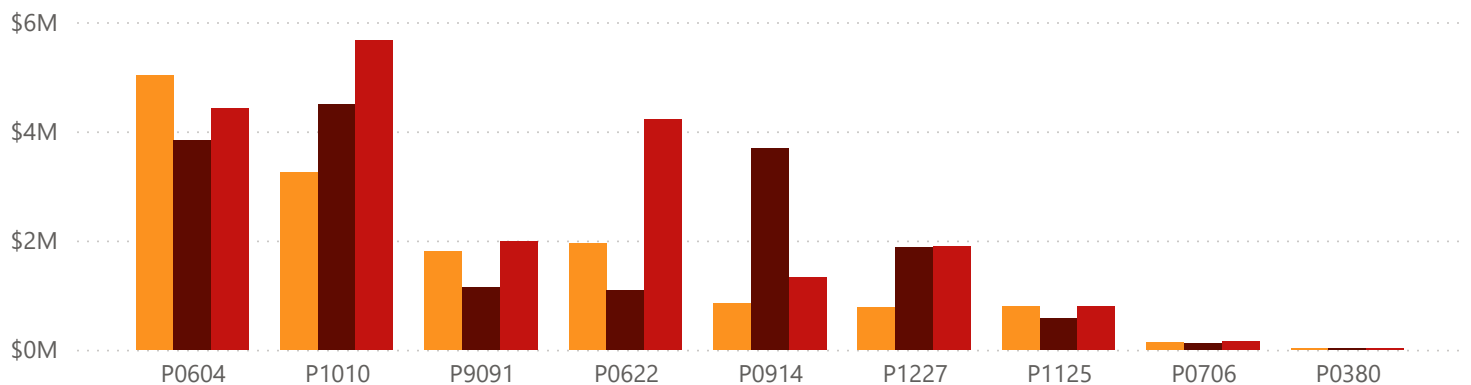
## Part Number

All

| Part Name        | Part Number | Buy Scenario Full Cost | Cost Avoidance | Make vs Buy |
|------------------|-------------|------------------------|----------------|-------------|
| Stepner          | P0380       | \$21 232,61            | \$2 053 339,89 | Buy         |
| Grotop           | P0604       | \$3 830 895,22         | \$3 249 521,72 | Make        |
| Inperfusion ator | P0622       | \$1 094 076,46         | \$1 073 031,46 | Make        |
| Porlity          | P0706       | \$122 722,38           | \$392 966,12   | Buy         |
| Chattlecrat      | P0914       | \$849 548,95           | \$759 878,95   | Make        |

## Buy Scenario Full Cost by Part Number and Supplier

Supplier ● Ringo Nova ● UCell, We Make ● Widgetmakers, Inc



| Part Name        | Part Number | Machine Model | Existing Capacity | Unit Capacity | Additional Unit Capacity Required |
|------------------|-------------|---------------|-------------------|---------------|-----------------------------------|
| Bewpittros       | P1010       | Lathe23       | 39273             | 8002          | 52 2                              |
| Chattlecrat      | P0914       | Lathe23       | 240000            | 1000          |                                   |
| Degunkifier      | P1227       | 3D Printer79  | 850               | 500           | 90 6                              |
| Dewgodur         | P1125       | 3D Printer79  | 1472              | 304           | 90 0                              |
| Furronaw         | P9091       | Lathe23       | 29760             | 13224         | 61 7                              |
| Grotop           | P0604       | 3D Printer79  | 476               | 1072          | 91 0                              |
| Inperfusion ator | P0622       | Lathe23       | 240000            | 1000          |                                   |
| Porlity          | P0706       | 3D Printer79  | 1854              | 1141          | 89 6                              |
| Stepner          | P0380       | Lathe23       | 51007             | 20963         | 40 4                              |

# Data & Definitions

## Context & Methodology

The data used in this report comes from two main sources: supplier quotes and internal manufacturing estimates. Each quote line contains a part number, a minimum production volume, a unit cost, and associated non-recurring expenses. Internal estimates incorporate material, energy, and labor costs, as well as available machine capacity data.

All calculations are based on a structured data model built in Power BI, ensuring consistent and reproducible analysis logic across projects. Raw data is not modified after loading, which guarantees the reliability of results.

To export data from a table, click on "..." in the top right corner of the visual, then select "Export data". Data is available in .csv and .xlsx formats.

## Key Indicators — Definitions

**Unit Cost** refers to the purchase price of one additional unit, including raw materials, production costs, and supplier margin.

**Extended Cost** represents the total cost of purchased products, excluding one-time expenses:  $\text{volume} \times \text{unit cost}$ .

**Non-Recurring Expenses** are one-time costs associated with production setup: tooling, engineering fees, and launch costs.

**Full Cost** is the total amount paid by the company:  $\text{extended cost} + \text{non-recurring expenses}$ . It is the central metric for any Make vs Buy decision.

**Incremental Cost** refers to new costs introduced by the in-house manufacturing decision, excluding previously committed costs (*sunk costs*), such as the purchase of additional equipment when existing capacity is exceeded.

**Scenario Volume** is a user-adjustable parameter that enables simulation of full costs for any production volume, regardless of the volumes originally quoted.

