

## Job Manager for Research and Development

### Common requests from Research and Development

1. Corporately I am not doing as well as I think I should be, but I can not identify the problems.
2. My people are collecting a lot of information, but everyone has a different spreadsheet and I can not analyze it.
3. If I ask my staff to pull together all their information to analyze our Jobs it means a staggering costs in labor to produce the reports and lost revenue during the process.
4. When I get an analysis of a project it is too late to fix problems.
5. I want to know what activities in their business are the most profitable and which ones are the least profitable or even lose money.
6. I need to measure if resources (labor and machines) are effectively uses.
7. I need to know if my estimates are accurate.
8. I want to reduce the high carrying cost of an overstocked inventory.
9. I want to reduce shortages and paying expedite charges.
10. Allocating labor improperly is very costly. Either having too must staff without enough to do or not enough staff when things get busy.
11. Current system is not real time and access to the information is limited or hard to use.
12. I can't produce a "cost each" trend of similar items being produced.
13. I need easy access to historical data to assist quoting new work.

**“Job Manager” is designed to address these issues. Read on.**

Business is different when you are doing “Research and Development”. Your business is not mass production; it is tracking the cost of the labor and materials used during the research and development process. You need software that lets you focus on the actual cost of time: Engineering Time, Design Time, Meetings with Clients, CAD, Feasibility Studies, Developing Quotations, Prototyping, Structural Testing, and more.

Many R&D companies are an “Outsource” company to a larger Manufacturer. You may be hired to do their R&D work. Each Job/Project’s profitability is the key to your success. Having full insight into every aspect of job is how you will have information to make business decisions that drive profitability.

Good organization is the key to understanding your job profitability. Here is a sample Job List. Notice the Job Status column: Planning, Quote, Order, or Completed.

No.	Master Job No.	Is Master Job	Description	Description 2	Status	Starting Date	Bill-to Cust
BOARD...		✓	Setting up New Board R...		Order	01/01/03	CANN
CLUBHO...		✓	New Country Club House		Order	01/13/03	TIFF
DEERFIE...		✓	Setting up Eight Work A...		Order	01/13/03	
GUILD...		✓	Setting up Ten Confere...		Order	01/01/03	
MJ-1000		✓	Alpha Project		Order		
J-0021	MJ-1000		Alpha Project	Finished Good #101	Order	11/25/03	
J-0022	MJ-1000		Alpha Project	Finished Good #101	Order	11/28/03	
J-0025	MJ-1000		Alpha Project	FG102 w/ Single Layer B...	Order	01/16/04	
J-0029	MJ-1000		Alpha Project	CHAMONIX Base Storage...	Quote	11/26/03	
J-0031	MJ-1000		Alpha Project	Finished Good #101	Quote	11/16/04	
J-0032	MJ-1000		Alpha Project		Planning		
J-0033	MJ-1000		Alpha Project		Planning		
J-0038	MJ-1000		Alpha Project	Finished Good #101	Order	06/09/04	
J-0075	MJ-1000		Alpha Project	Service #1	Order	08/26/05	
MJ-1003		✓	Large Design Project		Order		
34021	MJ-1003		Large Design Project	Service #1	Order	03/25/04	
J-0037	MJ-1003		Large Design Project	Service #1	Order	03/22/04	

You need software designed for a “Job Shop”, not for “Mass Production”. Job Manager for Microsoft-Navision provides your organization with real time reporting before, during, and after each Job is complete. If your objective is to track Estimated Cost and Actual Cost, in real time, then Job Manager is your solution.

Job Manager for Microsoft-Navision is a total solution that gives you an industry specific solution and a complete ERP back end. It is completely built in the leading technology of Microsoft which fully leverages the Microsoft User Interface.

You will have confidence that from the time the Job is setup to the time the Job is closed you can access, in detail, every cost posting allocated to your Job.

Many of your Jobs tend to be Quantity = 1, not 10,000. You need software that expects you to be providing a service; not making a product. We know what you want!

With each Job having a different set of specifications and requirements, the real time information on job profitability becomes the key element to generating consistent bottom line profits.

### Revenue – Cost = Profit

This formula seems so simple, but tracking your Job-To-Date Cost is difficult. Job Manager’s focus is to gather all the Job’s Cost and organize it in a manageable format.

Each Job will start with 6 Basic Cost Categories: Labor, Machine, Material, Outside Processing, Overhead, or Misc. As the screen below shows you will be able to compare your Estimated Costs to your Actual Costs and see both a Dollar Variance and a Graphical Percent Complete per Cost Category.

	Estimated	PO Outstanding Amount	PO Recv'd Not Invoiced	Actuals	Variance	Percent Complete
Revenue . . . . .	87,391.10			22,800.00	64,591.10	26%
Job Project Quantity .	100.00			49.00	51.00	49%
Labor Hours . . . . .	52.70			69.25	-16.55	100%
Machine Hours . . . .	31.42			0.00	31.42	0%
Labor Cost. . . . .	1,038.00			1,141.26	-103.26	100%
Machine Cost . . . . .	427.75			0.00	427.75	0%
Material Cost . . . . .	41,523.80	1,901.40	0.00	32,479.31	9,044.49	76%
Outside Processing . .	2,000.00	1,350.00	0.00	0.00	2,000.00	0%
Overhead Cost . . . .	50.00	0.00	0.00	0.00	50.00	0%
Misc Cost . . . . .	300.00	0.00	0.00	0.00	300.00	0%
Totals . . . . .	45,339.55	3,251.40	0.00	33,620.57	11,718.98	74%
Profit Amount . . . . .	42,051.55			-10,820.57		
Profit Percent . . . . .	48.12			-47.46		
Cost Each . . . . .	453.40			686.13	-232.74	74.15

In the picture above; notice the Revenue information too. Revenue – Cost = Profit. Margin and Cost Each are also displayed.

Notice the Job is 74% Complete, but they have gone over budget on the Labor Cost. All the fields are “Drill Down” fields that take you to the source transactions.

Performance can be further broken down into user defined Phases and/or by Tasks. (not shown). This extra cost control view is provided with a detailed Router that is also used to assist the scheduling process. See below a sample list of “Tasks” (Grinding, Painting, Polishing, Designing, Packaging) What would be your task list?

J-0034 Setting up New Board Room - Job Specific Router

Prod. No. FG101 100.00 Step No. 10 Res.# LIFT Phase Production Dept Task Grinding

Step No.	Phase Code	Phase Description	Task Code	Task Description	Step Resource No.	Resource's Cost Category	Resource Name	Setup Time	Run Time	Units/t
10	PROD	Production Dept	GRIND	Grinding	LIFT	Machine	Lift for Furniture	24.000	0.0333	
20	PROD	Production Dept	PAINT	Painting	LABOR 15	Labor	Labor 15	1.000	0.200	
30	QC	Quality Control ...	POLISH	Polishing	DP8	Machine	Drill Press #8	2.000	0.0125	
40	ENG	Engineering Dept	DESIGN	Designing	LABOR 15	Labor	Labor 15	0.750	0.400	
50	PROD	Production Dept	PACK	Packaging	LABOR 20	Labor	labor 20	0.500	0.300	
60	PROD	Production Dept	GRIND	Grinding	HT	Outside Pro...	Heat Treat	8.000	0.000	
100	PROD	Production Dept	POLISH	Polishing	DP9	Machine	Drill Press #8	0.300	0.400	

Estimated Cost BOM 41,683.60 Router 3,321.80 Totals 45,005.40 Amt. Each 450.05  
 Estimated Price 81,760.00 17,922.65 99,682.65 996.83

Total Contract ... 89,518.75  
 Contract Unit P... 895.19

The Job Manager uses Navision’s Job Ledger to hold all the actual cost transactions. You will know exactly Who, What, When, and Where costs were posted to your Job.

For “Make to Order” type of businesses, the entire Job can be setup from the Order Entry Screen.

Sell-to Contact . . . . . Mr. Mark McArthur Campaign No. . . . .

Master Job No. . . . . Responsibility Center . . . . .

Shipment Date . . . . . 10/16/03 Status . . . . . Open

Master Job No.	Description	Location Code	Quantity	Reserved Quantity	Unit of Measure...	Unit Price Excl. Tax	Tax
1049	Finished Good #101		285		EA	698.00	M

Item FG101 Finished Good #101

Job Order Line Functions Posting Print Help  
 View Router Steps  
 View Bill of Materials  
 Make one Job for this line item  
 Make a Job for every line item

03/07/05

The Customer, Ship Dates, and Special Instructions all comes into the Job Header automatically when this Job is generated. A pre-defined BOM and Router may also be copied to the Job's BOM and Router. Hence, demand is created for raw materials and labor hours.

The Job Manager is can be a full Project Costing system too. The Job Manager enables you to group multiple Jobs (Sub-Jobs/Sales Orders) under a single Master Job (Project). A Master Job is the Customer's Project and the Sub-Jobs are the individual Cost Elements that need to be tracked in detail.

No.	Master Job No.	Is Master Job	Description	Description 2	Status	Starting Date
<b>MJ-1004</b>		✓	Landscaping Developm...	<b>The Landings Office Co...</b>	<b>Order</b>	
J-0059	MJ-1004		Landscaping Developm...	Side Panel	<b>Order</b>	02/21/03
J-0068	MJ-1004		Landscaping Developm...	Finished Good #101	<b>Planning</b>	04/21/04
J-0069	MJ-1004		Landscaping Developm...	Finished Good #101	<b>Order</b>	08/18/03
<b>MJ-1005</b>		✓	Master Job from SO# 1...	<b>John Haddock Insuranc...</b>	<b>Order</b>	01/13/03
J-0047	MJ-1005		Master Job from SO# 1...	Housing LS-100,Oakwood...	<b>Order</b>	01/13/03
J-0052	MJ-1005		Master Job from SO# 1...	Finished Good #101	<b>Order</b>	01/27/03
J-0056	MJ-1005		Master Job from SO# 1...	Finished Good #101	<b>Order</b>	02/13/03
<b>MJ-1006</b>		✓	Master Job from SO# 1...	<b>The Cannon Group, PC.</b>	<b>Order</b>	01/13/03
J-0066	MJ-1006		Master Job from SO# 1...	Finished Good #2	<b>Planning</b>	02/21/03
<b>MJ-1007</b>		✓	Master Job from SO# 1...	<b>Deerfield Graphics Com...</b>	<b>Order</b>	04/04/03
J-0060	MJ-1007		Master Job from SO# 1...	Finished Good #101	<b>Order</b>	06/13/03
J-0061	MJ-1007		Master Job from SO# 1...	Service Project 1	<b>Planning</b>	06/16/03
J-0062	MJ-1007		Master Job from SO# 1...	Finished Good #101	<b>Order</b>	06/17/03
<b>M-DEER...</b>		✓	Deerfield Master Job	<b>Deerfield Master Job</b>	<b>Order</b>	
DEERFIE...	M-DEERF...		Setting up Eight Work A...		<b>Order</b>	01/15/01
J-0055	M-DEERF...		Deerfield Master Job	Project Item	<b>Order</b>	06/26/03
J-0057	M-DEERF...		Deerfield Master Job	Finished Good #101	<b>Order</b>	03/27/03

Within each Job we separate: Labor, Machine, Material, Outside Processing, Overhead, and Misc. Your next level of Cost Allocation is down to the individual activities (steps) of the Job. (Grinding, Polishing, Installing, Painting, Welding, Printing...) You define the level of detail and sequence of the work. (Feasibility, Quoting, Designing...)

The screenshot shows a software window titled "J-0034 Setting up New Board Room - Job Specific Router". At the top, there are input fields for "Prod. No." (FG101), "100.00", "Step No." (10), "Res.#", "Phase" (Production Dept), and "Task" (Grinding). Below this is a table with the following columns: Step No., Phase Code, Phase Description, Task Code, Task Description, Step Resource No., Resource's Cost Category, Resource Name, Setup Time, Run Time, and Units/t. An arrow points to the "Task Description" column.

Step No.	Phase Code	Phase Description	Task Code	Task Description	Step Resource No.	Resource's Cost Category	Resource Name	Setup Time	Run Time	Units/t
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At the bottom of the window, there is a summary table:

	BOM	Router	Totals	Amt. Each
Estimated Cost	41,683.60	3,321.80	45,005.40	450.05
Estimated Price	81,760.00	17,922.65	99,682.65	996.83

Additional controls include a "Calendar" button, a "Router" dropdown menu, and a "Help" button. On the right side, there are fields for "Total Contract ..." (89,518.75) and "Contract Unit P..." (895.19).

## Job Manager – Key features

1. Enables you to analyze your costs at multiple levels.  
Bill-to Customer  
Sell-to Customer  
Project Level  
Sub Job Level  
Cost Category Level  
Phase Level  
Task Level  
Transaction Level
2. Enables you to Schedule Jobs and Resources.
3. Estimating Costs and Revenue
4. Real Time comparisons of Actual Costs to Estimated Costs at multiple levels.
5. Real Time analysis of profitability by customer, master job and job levels.
6. Handles multiple ways of procurement, from below minimum and reorder points to Job specific ordering.
7. Multiple ways of consumption
8. Optional use of full payroll system with integration to Jobs.
9. One system handles financials and operations with full integration.
10. Jobs can be for Product Production or for Service Projects.

### **Other Features:**

- Schedule and Re-Schedule as needed.
- Full Work in Process Accounting (WIP)
- Material Demand is generated from the Job Budget. Optionally you can purchase materials specific to this Job directly for the Job's Budget window.
- The Router automatically calculates the Labor Cost and Machine Cost.
- The Router holds the Job Schedule too.
- Planning Jobs (Estimate Jobs) can have both Estimated Cost and Estimated Price. From a Planning Job, a Navision Sales Quote is generated for the customer's approval.
- Transaction Entries may be viewed individually, by Step No., by Job, or by Phase Code.
- Keep Job History for future reference.

- Copy a New Job’s Estimate from an past Job’s Estimate.
- Job Cost is completely integrated with Sales and Marketing, Purchases, Inventory, Payroll, and General Ledger.

**Benefits:**

- Know where your costs are on every Job, every minute of the day.
- See Cost at the Job Level, Task Level, or Transaction Level
- Let the system tell you what Materials to purchase based on the Bill of Materials.
- No “Interfacing” with any other software. Job Manager is “embedded” within Navision.
- Leverages Microsoft’s world renowned Office Interface for easier training.
- Incorporates Microsoft technologies providing for integration beyond just ERP
- Easy Access to all the details from the Summary. (Drill Downs)
- Job Manager provides an easy way to manage resources, and track the status of production jobs by monitoring dates, activities, material requirements, and subcontractor activities within a single integrated system.

**Face it, you are a Job Shop! Don’t buy software for Mass Production.**

<i>Job Shops</i>	<i>Mass Production Operations</i>
Make to order	Build to stock
No finished goods inventories	Finished goods inventories/SKU’s
Different products	Standard products
Sell to other companies	Sell to distributors or end users
Customer order driven	MRP demand forecast driven
Bid on RFQ’s to get work	No RFQ’s
Estimating is critical	Standard costing
Customer pricing (quotes)	Market pricing

Lead time required	Fill orders from finished goods inventory
Many schedule changes	Few schedule changes
Set ups/changeovers frequent	Set ups/changeovers less frequent
Direct contact with customer	Indirect contact with remote customer
Smaller companies	Larger companies
Owner managed	Professionally managed
Variable overhead allocation	Labor-based overhead allocation
Variable volume	More stable volume
Order backlog is good	Order backlog is bad (stockouts)
More dynamic	More static
More skilled labor (variable tasks)	Less skilled labor (repetitive tasks)
Dynamic scheduling	Static scheduling
Shorter runs	Longer runs
Improve by reducing lead time	Improve by reducing inventories