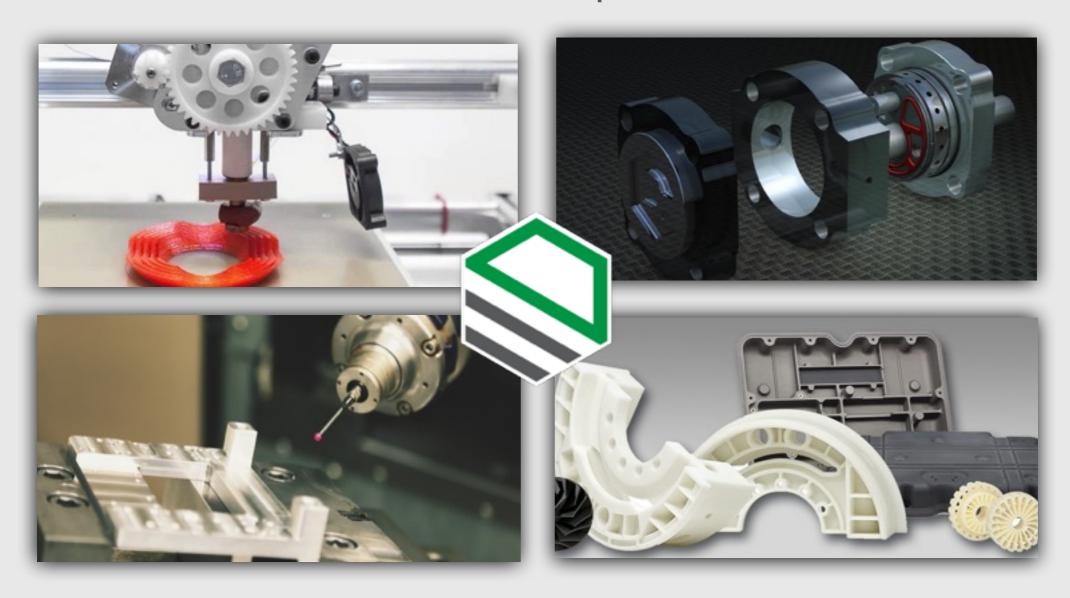


# **CONTRACT MANUFACTURING**

### For Startups





## ISSUES WITH BRINGING YOUR PRODUCT TO MARKET

- Engineering
- Late delivery
- Expensive tooling
- Inability to deliver on promised costs
- Difficulty sourcing and tracking too many parts
- Samples cannot be produced and require redesigning

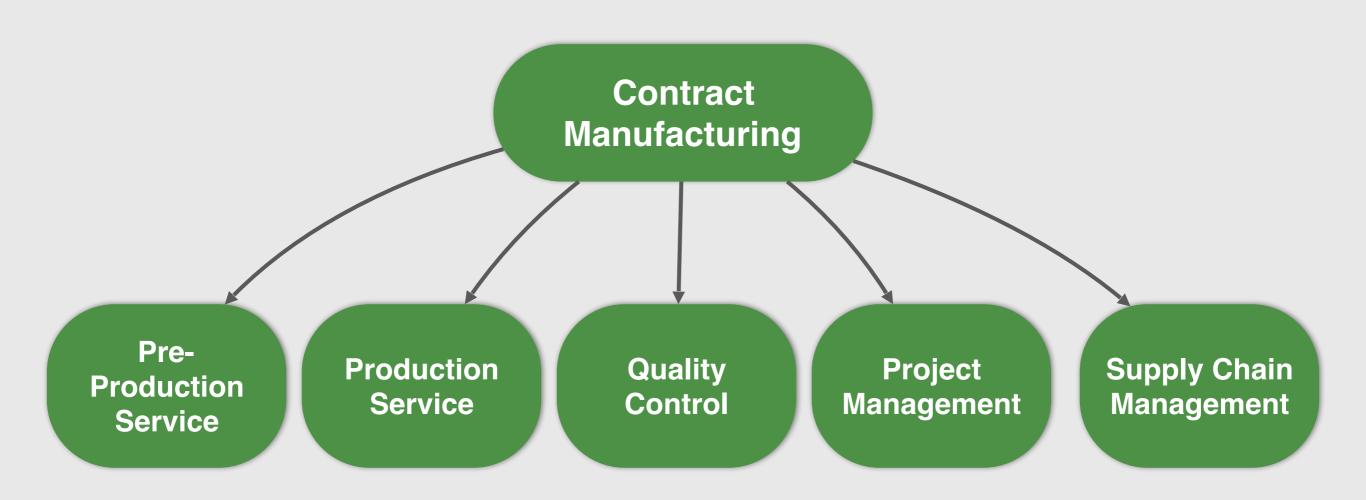




# WHAT IS CONTRACT MANUFACTURING?

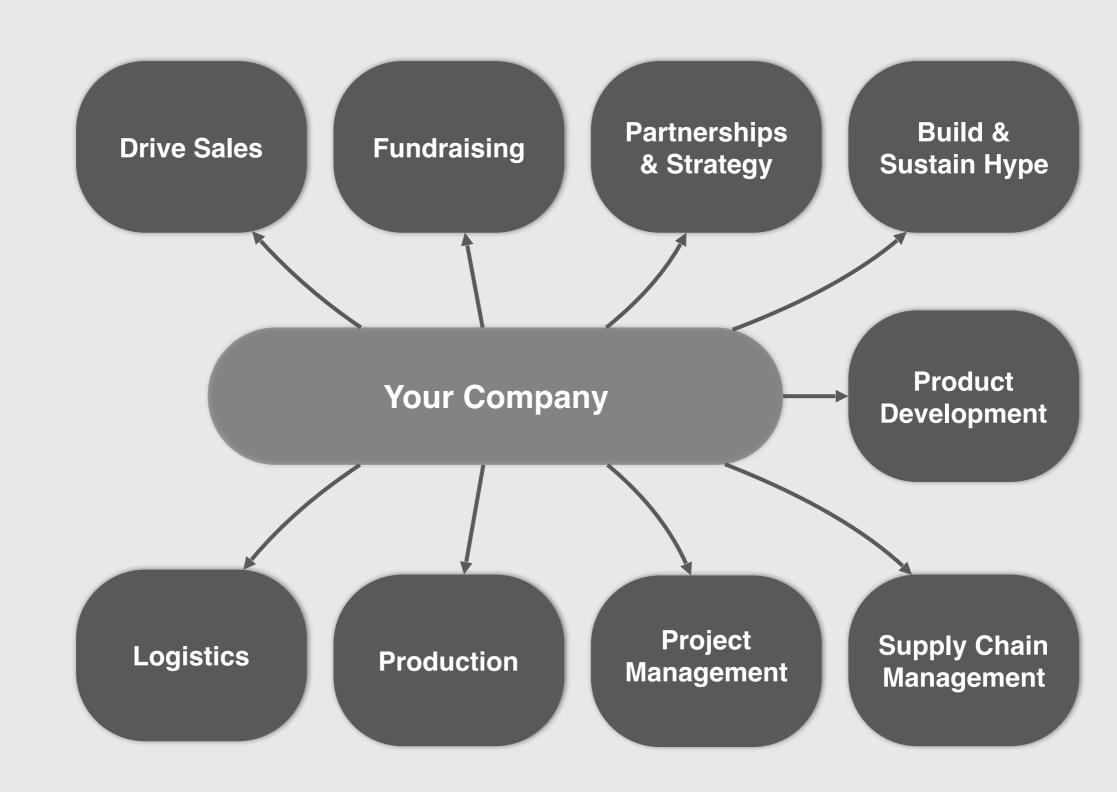


## WHAT IS CONTRACT MANUFACTURING?



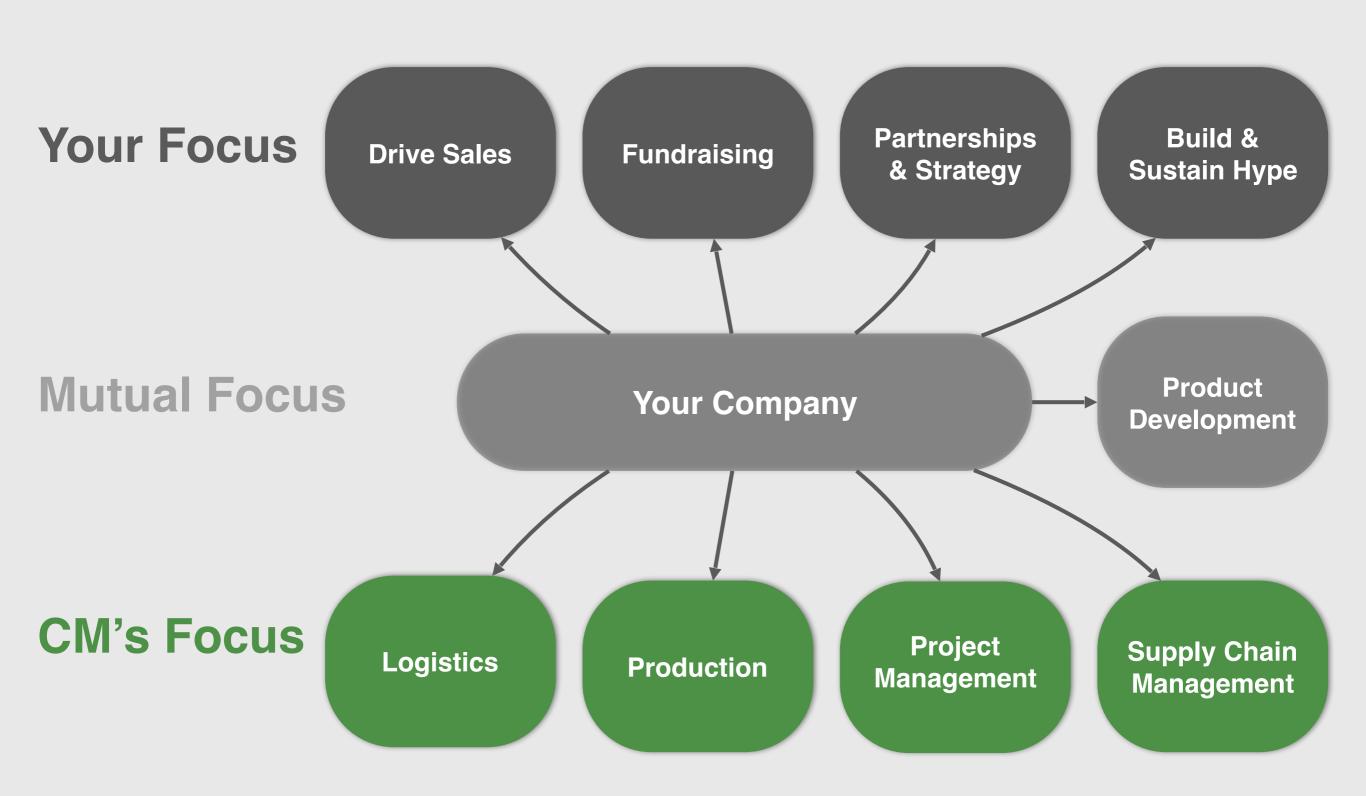


### HOW A CONTRACT MANUFACTURER CAN OFFER SUPPORT





### HOW A CONTRACT MANUFACTURER CAN OFFER SUPPORT





# **DEVELOPMENT ISSUES**

Topic	Issues	Solution									
Engineering & Tech Support	Not sure of the most efficient way to manufacture and assemble a product	<ul> <li>Make the transition from development to manufacturing smoothly</li> <li>Have both ME's &amp; EE's</li> </ul>									
Supply Chain	<ul> <li>Overcomplicated supply chain</li> <li>Struggle with knowing where to begin</li> <li>Vetting new suppliers the first time is time-consuming</li> </ul>	<ul> <li>Manage all vendors on your behalf</li> <li>Provide a list of pre-approved vendors</li> <li>Manage all moving pieces around production allowing for allocation resources towards driving sales.</li> </ul>									
Project Management	<ul> <li>Complex projects are more time consuming and difficult to manage</li> <li>Startups can't allocate the proper resources towards project management</li> </ul>	<ul> <li>Provide production updates</li> <li>Can manage and coordinate your project</li> <li>Provide a department dedicated to project management</li> <li>Free you to up to focus on managing and growing your business</li> </ul>									
Costing	<ul><li>Correlation between costs and quality</li><li>How are assembly costs added in?</li><li>How target parts to cost down?</li></ul>	<ul> <li>Provide a cost breakdown</li> <li>Provide full quote for raw materials and assembly</li> <li>Provide DFMA that looks redesigning parts fo</li> </ul>									
Lead Time	<ul> <li>Long lead time associated with sourcing it yourself</li> <li>Doubts surrounding when you'll be able to provide your product to customers.</li> </ul>	<ul> <li>Provide schedule on the first day</li> <li>Provide schedule breakdown for prototypes, pre-production, tooling &amp; mass production</li> </ul>									
Development Speed	Development is too slow	<ul> <li>Experience and product development background</li> <li>Internal departments to expedite development time</li> <li>Partnerships with 3rd parties to provide swifter development</li> </ul>									



### TYPES OF PROTOTYPES

Proof of Concept (PoC)

Proves that the concept you have can work. Functional Prototype

Tests that the design works as intended.

Won't look like the final version of your product.

Aesthetics Prototype

A physical sample of how the product will look and feel.

Used to test color, feel, and shape of the final product.

Golden Sample

Functional and visual proof your product can be made according to your specific materials.

The sample you base mass production on.

Pilot Run

Small trial run to ensure mass production will run efficiently without hiccups

Usually around 5-10% of the quantity for the first PO



### HOW A CM'S TEAM CAN PROVIDE VALUE

#### **SUPPLY CHAIN TEAM**

- Sourcing
- Lead time
- Payment terms
- Vendor coordination
- Coordinate sub assembly
- Vendor manufacturing schedule

#### PROJECT MANAGEMENT TEAM

- Point of contact
- Customer support
- Project scheduling
- Real-time lead times
- Coordinate with the department heads



## HOW A CM'S TEAM CAN PROVIDE VALUE

#### PRODUCTION TEAM

- Tooling
- Assembly
- Production samples
- In-house production
- Production Documents

#### **QUALITY CONTROL TEAM**

- Quality tests
- QC Documents
- Quality standards
- Quality Specifications
- Supplier quality control
- Testing tools and equipment
- IQC (Incoming Quality Control)



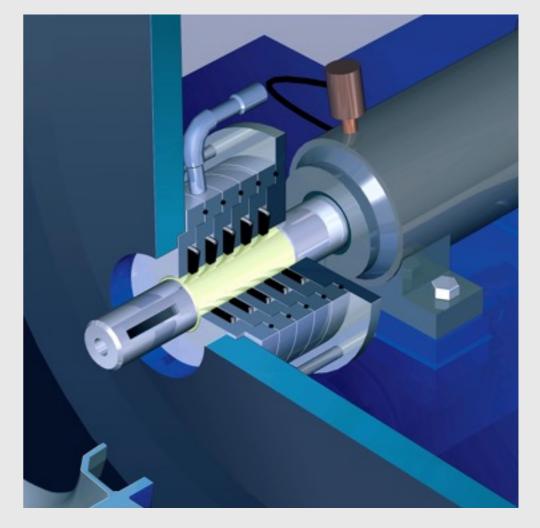
## HOW A CM'S TEAM CAN PROVIDE VALUE

#### **ENGINEERING TEAM**

A product isn't always designed economically. An engineering team can analyze your design and ensure your product can be manufactured

efficiently and cost-effectively.

- DFMA
- Cost reduction
- Product scheduling
- Engineering drawings
- Bill of Material (BOM) finalization
- Part & Sub component specifications





### TRANSITIONING FROM DEVELOPMENT TO PRODUCTION

- Speak with your CM about the following topics to ensure development will smoothly lead into production:
  - Project Lead Time When do you need to launch?
  - Prototyping How many prototypes do you need to validate the market?
  - BOM Finalization Is your BOM objective and final?
  - Production Costing What is your target price?
  - Tooling Design Are your tools made as efficiently as possible?
  - Production Documents Are your processes objective?



## MANUFACTURING CONSTRAINTS

- Manufacturing lead time:
  - Tooling
  - Production
  - Development and Prototyping
- Response time
- Engineering & Technical Solutions



# MANUFACTURING LEAD TIMES (A ROUGH GUIDE)

		Week 1					Week 2				Week 3					Week 4					
		М	Т	W	TH	F	М	Т	W	TH	F	М	Т	W	TH	F	М	Т	W	TH	F
Prototypes:																					
	Plastics																				
	Metals																				
	Electronics																				
Tooling																					
	Plastics																				
	Metals																				
Production																					
	Metals																				
	Plastics																				
	Electronics																				



### WHEN TO SEEK A PARTNER?

- Sooner rather than later
- The myth is to search for a CM when you need to scale up production
  - However, usually it's too late when you need to scale up
- Are you the following:
  - On a schedule?
  - Do you need to streamline the development process?
  - Seeking speed & support?



### WHAT TO SEND YOUR CM

- Bill Of Material: BOM
  - Material, Processing, Part Finish, Color & Quantity
- Target Costs
- Drawings (2D & 3D)
- Project Time Line
- Volume
- Distribution Plan



### CONCLUSION

- You don't have to make the journey alone.
- Allocation of your companies resources are key to your success.
- Your focus is solely on driving sales, building a brand and generating hype!
- Allocate wisely





### THANK YOU

- Follow us on <u>Facebook</u> or <u>LinkedIn</u> and see what we're up to.
- For more information, please visit us at <u>www.epowercorp.com</u>
- Want to get in touch? Reach out to us at <a href="hello@epowercorp.com">hello@epowercorp.com</a>
- Want to learn more about manufacturing? Check out our <u>Resources</u>
   <u>Page</u> to learn more.



### RESOURCES PAGE

- Prototypes:
  - Prototyping and Types of Product Prototypes
- Product Development:
  - Development to Production (Case Study)
- Metals:
  - Metal Fabrication 101
  - Metal Finishing (Metal Fabrication)
  - Turning: An In-Depth Look (Metal Fabrication)
  - Milling: An In-Depth Look (Metal Fabrication)
- Plastics:
  - Different Types of Plastics
  - Plastic Injection Molding
- Resource: <u>CM Evaluation Form (PDF)</u>