

Global Supply Chain - Headsets

Xiamen November 8, 2004

Peter Tomlinson, Executive VP, Global Supply Chain

Agenda

1. Global Supply Chain
 - Mission Statement
 - Management and organization
2. Top 5 achievements during 2003-04
3. Top 5 Current focus areas

GSC mission statement

- To deliver superior value-for-money products to the Mobile and CC&O divisions within the areas of Quality, Logistics, Procurement and Operations
- To integrate all manufacturing partners to provide seamless solutions to all customers

Guided by our three core values...

Reduced cost
Speed & Flexibility
Planned Inventory

Focus areas....

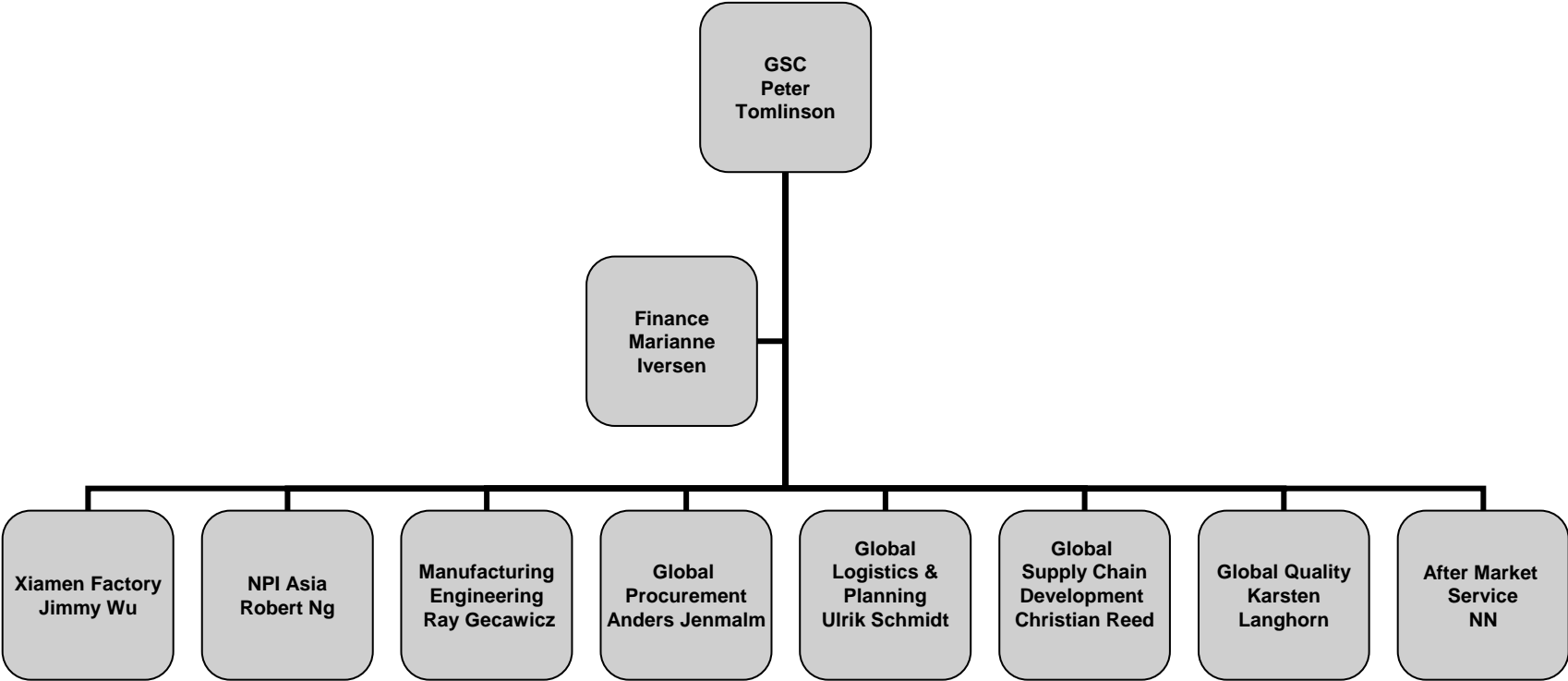
Ramp Up, Capacity, Procurement,
Speed, Flexibility

Management

Peter Tomlinson, Executive VP of Global Supply chain

- ⇒ Twenty-five years experience in manufacturing and supply chain
- ⇒ Focus of experience in Telecoms and IT business
- ⇒ Cellular business since 1986, Bluetooth going through the same growth scenario
- ⇒ Work experience from all regions and 12 years in China and Asia
- ⇒ Key task in GN Netcom is to build a team capable of delivering a world class supply chain

GSC Organization



Achievements during 2003 and 2004

1. Build manufacturing base in China
2. Establish second source manufacturing and supplier base
3. Integrate manufacturing partners in GSC
4. Achieved volume ramp up in mobile
5. Build organization to meet future needs

Manufacturing base in China

Location: Xiamen, China

General Manager: Jimmy Wu

Established: 2001

No. of employees: 668

Production lines

- CC&O products
- Mobile products (both Jabra and OEM)
- Hearing aids (GN ReSound)

Second source manufacturing and suppliers

Second source production facilities secured

- ⇒ Xiamen, with Celestica and Vtech for pcb's
- ⇒ WKK
- ⇒ PAN
- ⇒ ATO

Established direct relationships with component suppliers

Second source supplier base established on all critical components

- ⇒ Better pricing
- ⇒ Reduced lead times
- ⇒ Better inventory management and cycle times

Sustainability

A part of the manufacturing and supplier agreements are

- ⇒ Regulatory requirements (CE, FCC, IC, UL, CSA, etc.)
- ⇒ Quality Management Systems requirements (ISO 9001:2000)
- ⇒ Environmental requirements (ISO 14001)
- ⇒ Code of Conduct, compliance to WTO concerning e.g:
 - ⇒ Basic human rights
 - ⇒ Employee health, safety and security
 - ⇒ Child labor

Follow up:

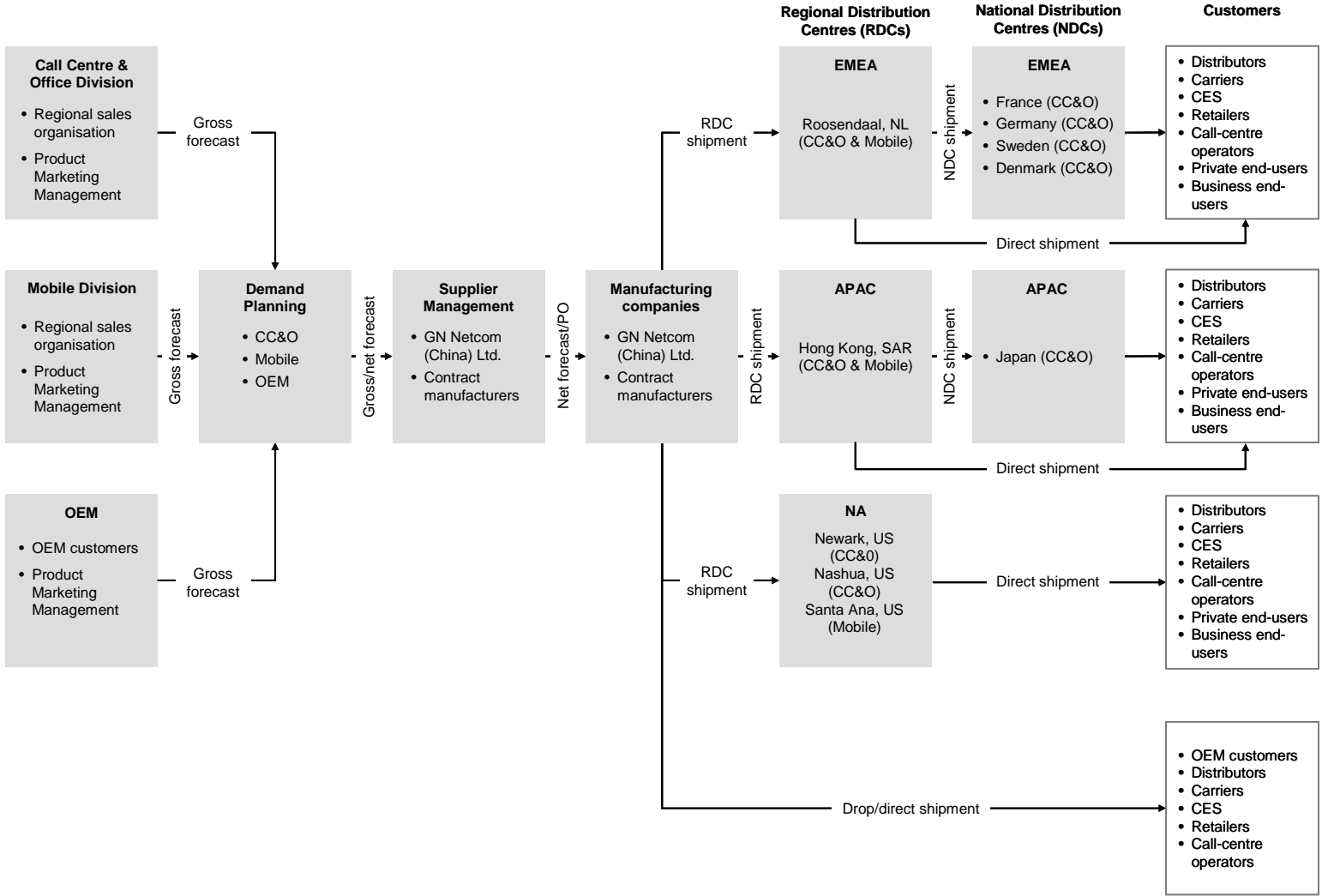
Planned audit and reviews on tier 1 and 2 manufacturers and suppliers

Planned quarterly business reviews with manufacturers and suppliers

Manufacturing partners integrated in GSC

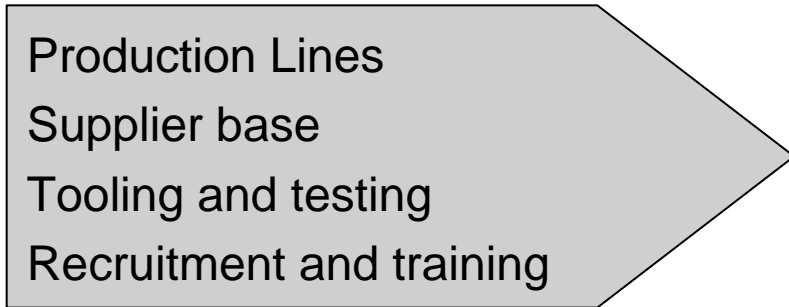
- ⇒ Contractual framework and working conditions
- ⇒ Agreed forecast process with flexibility terms
- ⇒ Inventory process for suppliers and sub-suppliers
- ⇒ Production and quality processes implemented
- ⇒ Demand planning and daily shipment schedules
- ⇒ Logistics arrangements, ship to hub, drop ship, etc.

● ————— PLANNING ————— ● ————— MANUFACTURING ————— ● ————— DELIVERY ————— ●

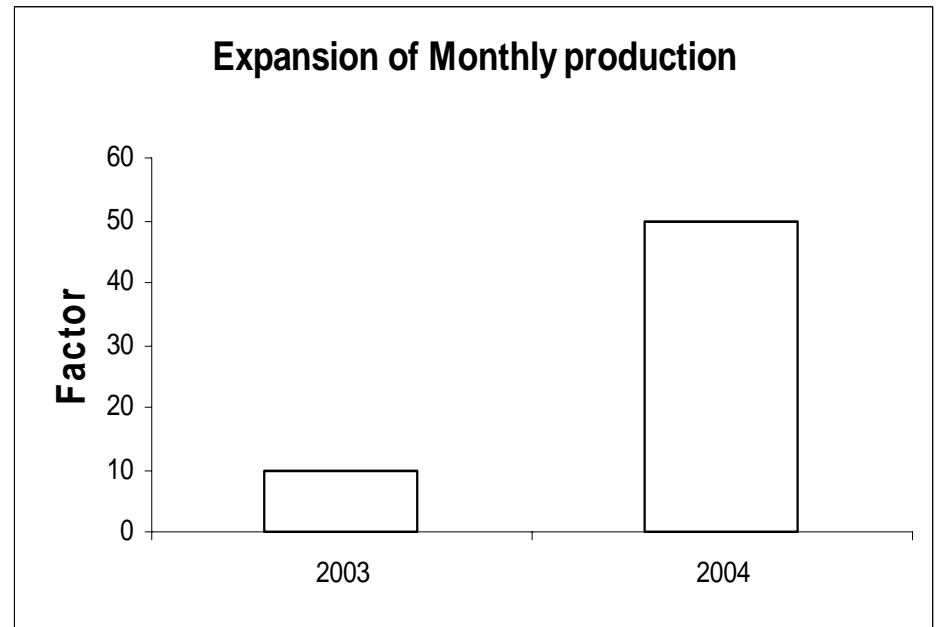


Achieved volume ramp up in mobile

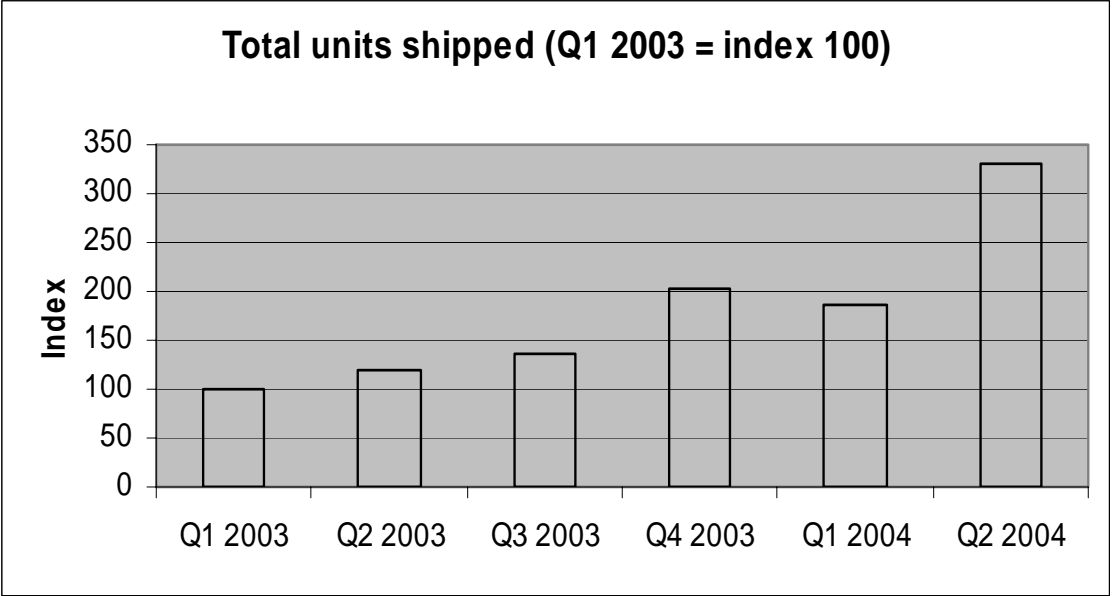
Expansion by Factor 5



Maintaining Quality and on time delivery



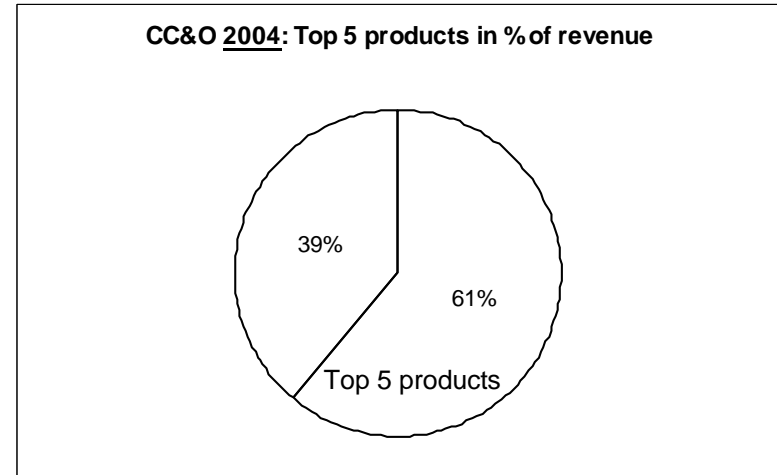
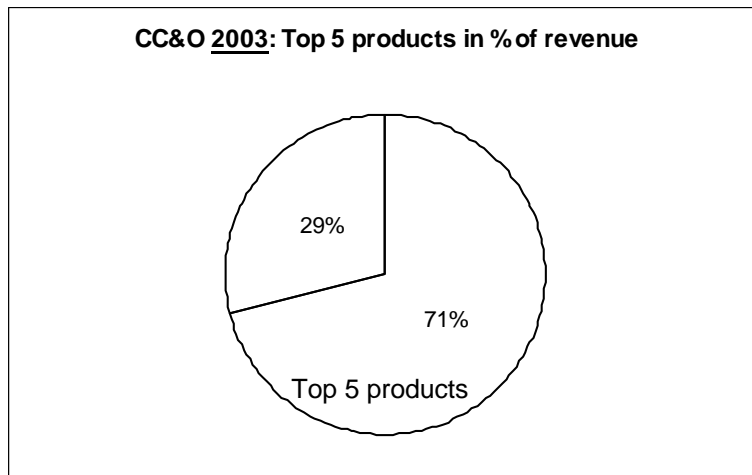
Growth in total units shipped in CC&O and Mobile



Q1 2003 to Q1 2004:
Factor 1.9

Q2 2003 to Q2 2004:
Factor 2.7

A more diversified product mix in CC&O



CC&O.... a more diversified product mix

Mobile.... top 5 products unchanged at 84%

Current focus areas

1. Simplify the supply chain
2. Reduce new product introduction time line
3. Correct inventory profile to match market needs
4. Develop supply chain processes and tools
5. Grow competence of our manufacturing partners

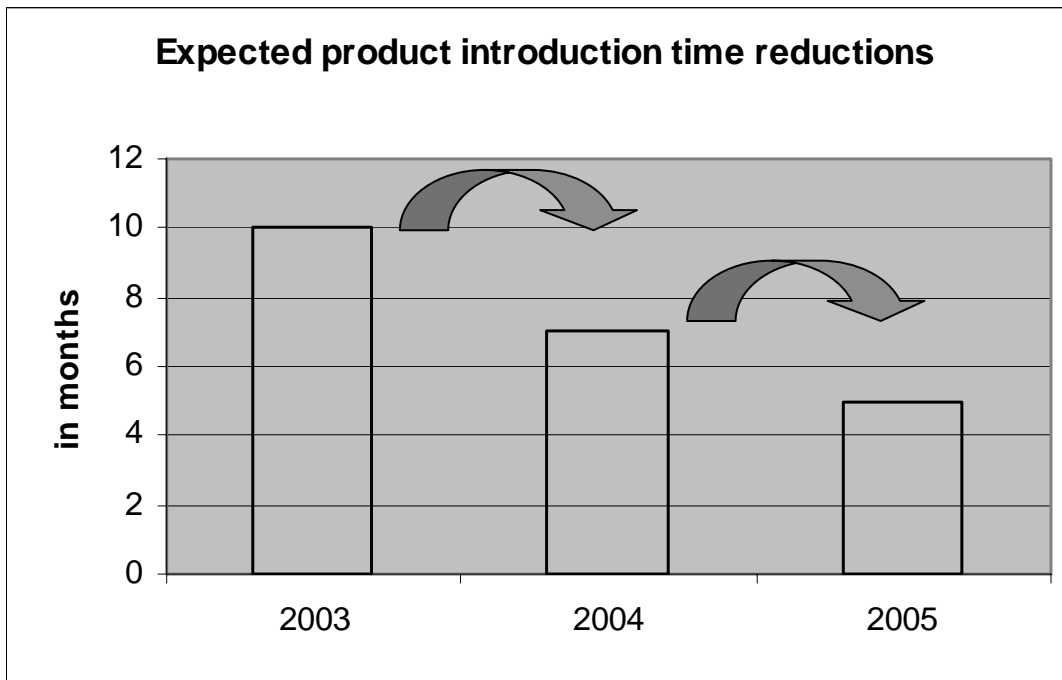
Simplify the supply chain

- ⇒ Establish cost efficient process to deliver to customers
- ⇒ Use a mix of hubbing and drop ship to meet cost and flexibility targets
- ⇒ Provide incentives for make to order and drop ship
- ⇒ As volume builds examine alternative places to do pack out
- ⇒ Servicing many different channels from OEM down to retail and end users, a fast cost efficient methods to match is needed

Reduce time for new product introduction

- ⇒ Re-organize priorities to focus on DFX at the front end
- ⇒ Improve skills in New Product Introduction (NPI) team to take products into manufacturing partners fast
- ⇒ Build engineering and supply chain skill in manufacturing base
- ⇒ Strengthen the prototype build phase, reduce A and B builds
- ⇒ Prepare for “cold start” process

Reduce product introduction time



Time reduction target:

From 10 to 5 months

Correct Inventory profile to match market needs

- ⇒ Improve demand planning and ordering process
- ⇒ Reduce lead times
- ⇒ Plan semi finished goods at manufacturing partners
- ⇒ Implement VMI
- ⇒ Automate IT systems for faster and more accurate communication

Develop supply chain processes and tools

- ⇒ Use of Navision throughout GSC
- ⇒ Implement Demand Planner
- ⇒ Roll out bar coding process for product traceability
- ⇒ Strengthen processes throughout GSC
- ⇒ Communication between regions and teams

Global Logistics process



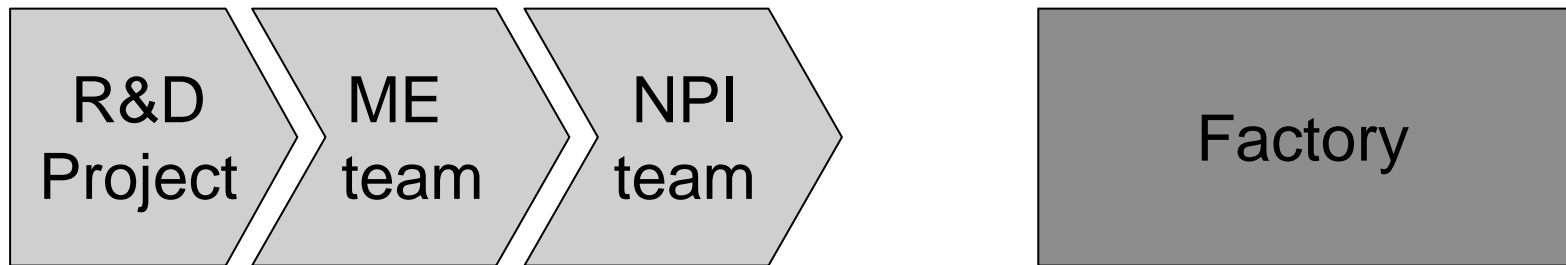
Issues:

- ⇒ Forecast consolidation
- ⇒ Planning inventory
- ⇒ Supplier performance and relationship
- ⇒ Hub/shipping coordination

Grow competencies at our manufacturing partners

- ⇒ Demand Planning
- ⇒ MRP execution
- ⇒ Technology and engineering skills
- ⇒ Automated systems linking to GNN
- ⇒ Streamline communication structures

Production creation process



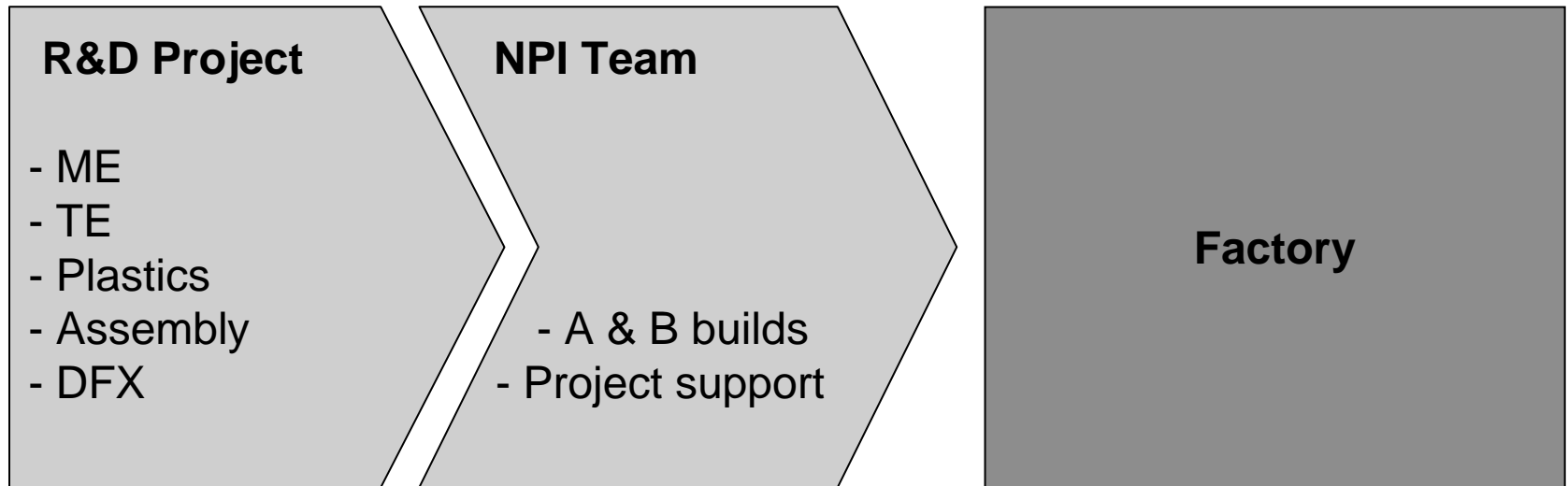
- Issues:
- ⇒ Time
 - ⇒ Information hand off
 - ⇒ Get it right first time

Global Supply Chain Challenges

Achieved fast and steep ramp up maintaining quality and on time delivery

- ⇒ Reduce NPI from 10 to 5 months
- ⇒ Reduce cost of delivery
- ⇒ Grow competencies at our manufacturers and suppliers
- ⇒ From prototype to mass production
- ⇒ Automate IT systems for faster and more accurate communication

Product Creation Process – step 1



- Actions:
- ⇒ ME manager
 - ⇒ Strengthen NPI team
 - ⇒ Hire engineers into factories
 - ⇒ NPI purchasing person
 - ⇒ Mechanical sourcing person

Product Creation Process – step 2

