

**DRM ASSOCIATES
CAPABILITIES
WITH DESIGN TO COST**

Contact: Kenneth Crow | Tel: 310-377-5569 | Email: k.crow@npd-solutions.com

DRM ASSOCIATES

- Firm with recognized expertise in new product development & core focus on value
- Kenneth Crow is the firm's Principal consultant
- Nine highly-experienced consultants
- Extensive client list - Fortune 500 and international clients
- Led consortium to identify 270 best practices
- Extensive training experience and materials - conducted over 200 workshops

KENNETH CROW

- 30+ years consulting in product development & manufacturing
 - Former Director, Mfg. Consulting, Ernst & Young
 - President, DRM Associates
- Recognized expert in product development, design to cost, target costing, QFD, VA, and DFM
- Certified New Product Development Professional
- Frequent international speaker and author
- Former President & Director of the Society of Concurrent Product Development



For further information on Ken, see
www.npd-solutions.com/kcrow.html

DRM CONSULTANTS

Jim Rains

- Expert in value analysis/function analysis, design to cost, and lean manufacturing
- Value analysis projects have averaged 20% cost savings

Pete Cornish

- Expert in design for manufacturability and assisting companies to implement initiatives

Jim Ayers

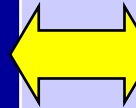
- Expert in supply chain management, design to cost, equipment cost analysis and quality function deployment

For further information on our consultants, see
www.npd-solutions.com/consultants.html

TARGET COSTING & DESIGN TO COST

Target Costing

- Maximize the value proposition of a product to the customer in the defined market segment at the defined price point
- and
- Maximize the program profit to the developer

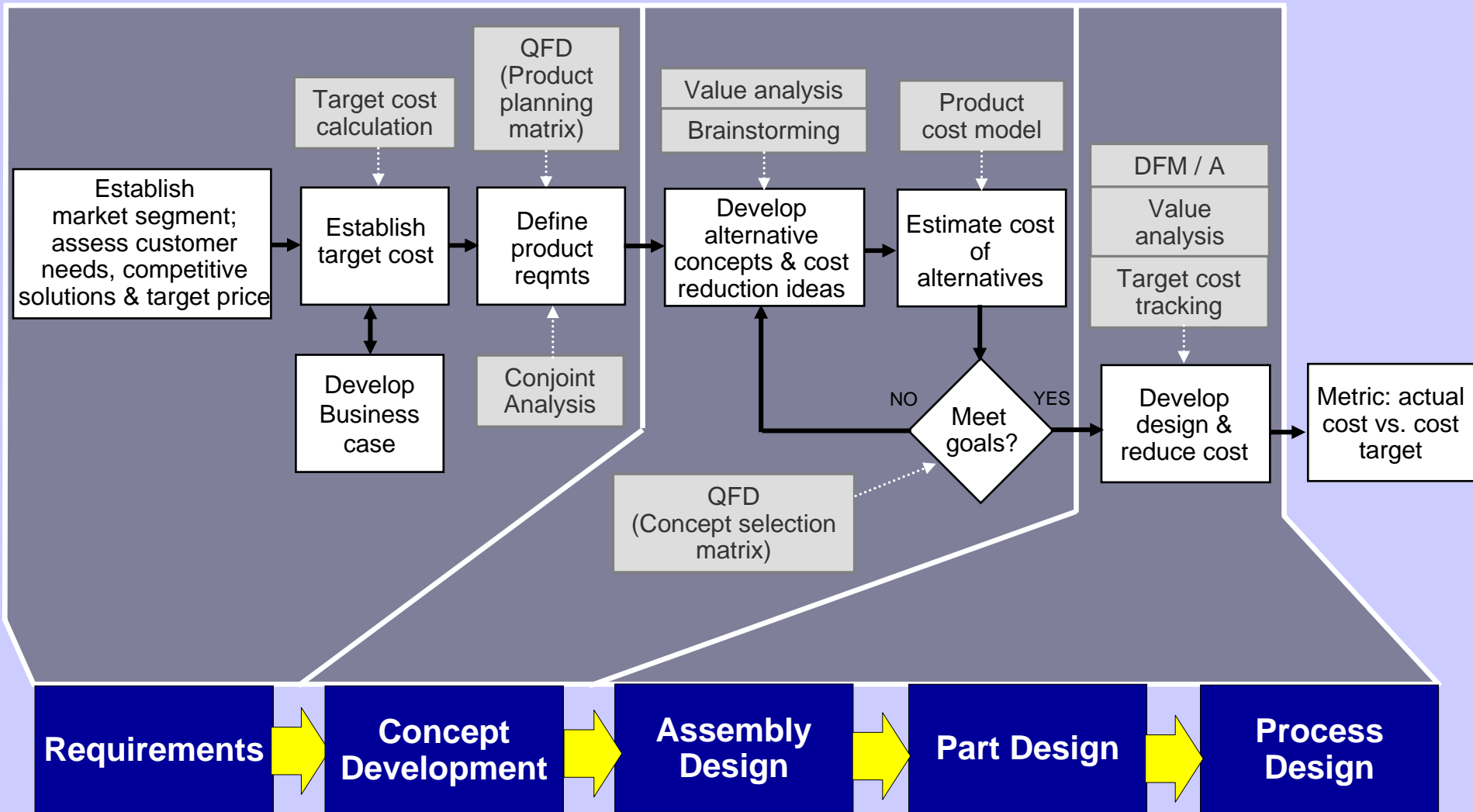


Design to Cost

- Jointly achieve the target cost or design to cost goal and the defined product requirements

DESIGN TO COST PROCESS

We bring a well-defined process and set of tools



DTC SERVICES

DTC Process Assessment

- Assess the current development process

Training

- Conduct DTC Workshop

DTC Process Implementation

- Assist defining the DTC process, establishing tools and data, creating metrics, and deploying initiative to the enterprise or business unit

DTC Project Facilitation

- Facilitate project teams establish a target cost, plan product requirements to maximize value with QFD, conduct value analysis, develop and evaluate concept alternatives, evaluate and improve manufacturability, & measure results

DTC WORKSHOP AGENDA

1. DTC Introduction
2. Establishing a Target Cost (DTC Objective)
3. Tracking Target Cost Achievement or DTC Results
4. DTC During Requirements Definition
5. DTC During Concept Development
6. DTC During Assembly Design
7. DTC During Part Design / Selection
8. DTC During Process & Supply Chain Design
9. Applying Design to Cost
10. Attacking Indirect Costs
11. Process & Organization
12. Summary

DTC EXPERT SERIES WORKSHOPS

Concept Development (3 days)

See www.npd-solutions.com/condevws.html

Value Analysis/Value Engineering (3 to 5 days)

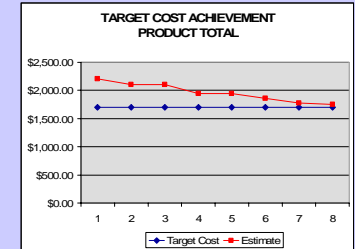
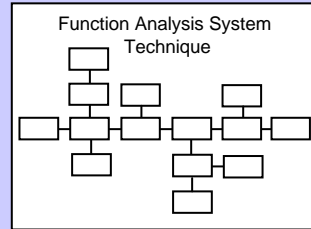
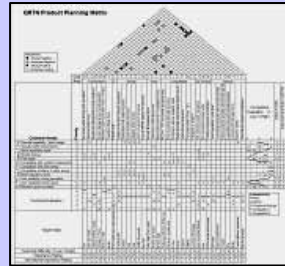
See www.npd-solutions.com/vamod1ws.html

Design for Manufacturability/Assembly (3 days)

See www.npd-solutions.com/dfmws.html

DTC PROJECT FACILITATION

TARGET COST CALCULATION WORKSHEET					
Product	Refrigerator Model T17200	Prepared By	D. Randal	Date	6/1/2005
Sign	Price/Cost Element	Estimate	% Factor	Per Unit	Amount
-	Manufacturer's Suggested Retail Price				\$ 495.00
-	Standard Dealer Margin	35%			\$ (174.75)
-	Cost to Retailer				\$ 320.25
-	Shipping/Contribution Cost to Retailer	5%		\$ 16.00	\$ (16.00)
=	Setting Price to Retailer				\$ 304.25
-	Distribution Cost/Markup	15%			\$ (45.71)
-	Shipping/Logistics Costs to Distribution Center	5%		\$ 17.00	\$ (17.00)
=	Manufacturer's Setting Price				\$ 287.54
-	Profit Margin	4%			\$ (11.50)
-	Research Cost	3%			\$ (8.63)
-	Corporate Allocations	10%			\$ (28.75)
-	Business Unit Setting, General & Administrative	1.7%			\$ (4.89)
-	Non-Recurring Development Cost			1200000	
-	Estimated Production Volume			200000	
-	Allocated Non-Recurring Development Cost	0%		6.00	\$ (6.00)
=	Business Unit Target Cost				\$ 207.14
-	Overhead	45%			\$ (84.31)
=	Current Target Cost (Labor & Material)				\$ 142.83



Establish Target Price and Cost

Product Planning With QFD

Value Analysis and Concept Development

DFM Evaluation and Improvement

Measuring and Monitoring Results

- Conduct Voice of the Customer investigation
- Analyze and establish target price
- Derive target cost

- Prioritize customer needs
- Develop product strategy to maximize the value proposition
- Perform QFD product planning
- Define requirements

- Gather data
- Conduct value analysis
- Develop concept alternatives
- Evaluate concept alternatives

- Conduct DFM evaluation
- Develop more manufacturable design

- Monitor program
- Develop cost estimates
- Track target cost achievement

ACHIEVING DESIGN TO COST

Our approach to design to cost is based on five stages of design and using the appropriate tools and practices in each stage. We bring knowledge of many of the tools and practices to support design to cost.

	Quality Function Deployment	Conjoint Analysis	Value Analysis / Function Analysis	Innovation & Creativity Techniques	Consideration of Alternatives	Cost Models/Cost Estimating Systems	Design for Assembly & Test	Design for Manufacturability	Early Supplier Involvement	Mistake-Proofing	Process Automation and Integration	Process Re-engineering / Lean Manufacturing	
Requirements Definition													
Concept Development													
Assembly Design													
Part Design													
Process Design													