

Technology management tools

Technology

: Hard ware

: Soft ware

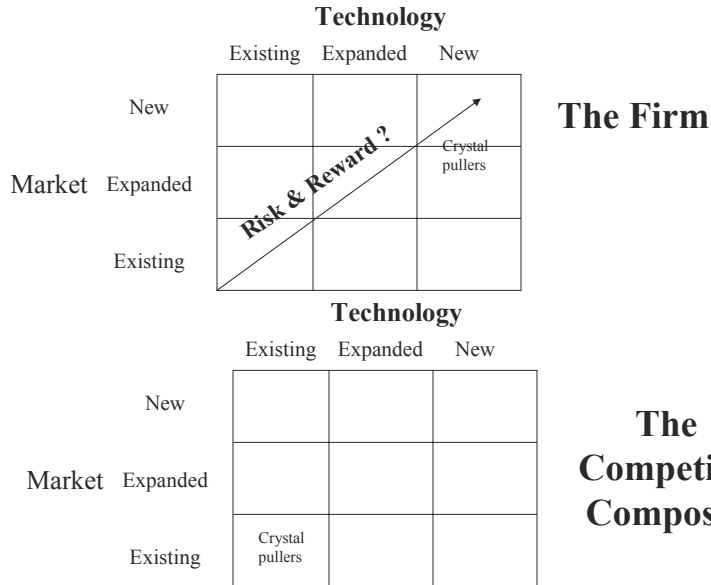
: Brain ware

Technology assessment

	1	2	3
-1			
-2			
-3			

0:
1:
2:
3:

Technology Market Matrix



Quality Function Deployment

Allocating Design & Mfg. Resources to Features Most Valued by Customer

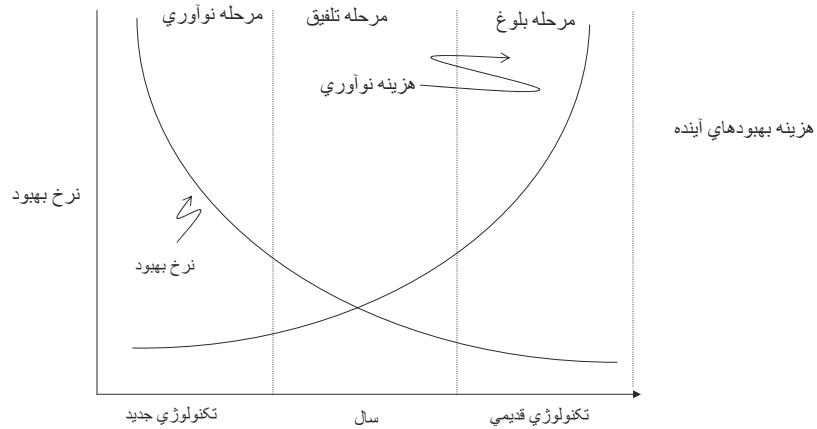
Product Feature	Customer Weightage	Your Product		Competitor A's		Competitor B's	
		Score	Total	Score	Total	Score	Total
Price	6	10	60	5	30	8	48
Operating Cost	8	8	64	8	64	10	80
Performance 3	7	5	35	6	42	6	42
Performance 4	10	9	90	10	100	7	70
Feature 5	2	10	20	5	10	4	8
Feature 6	5	6	30	4	20	10	50
Feature 7	7	0	0	10	70	0	0
Feature 8	3	10	30	0	0	5	15
Total			329		336		313



Competitive Product specification	S	خرید تکنولوژی	توسعه قابلیت تکنولوژیک	تمرکز بر فرصتها
	A	خروج	جستجوی فرصتها	تقویت قابلیت بازاریابی
	W	خروج	یافتن فرصت خاص	جستجوی همکار
		W	A	S

Company capability

W: Weak A: Average S: Strong



National technology policy

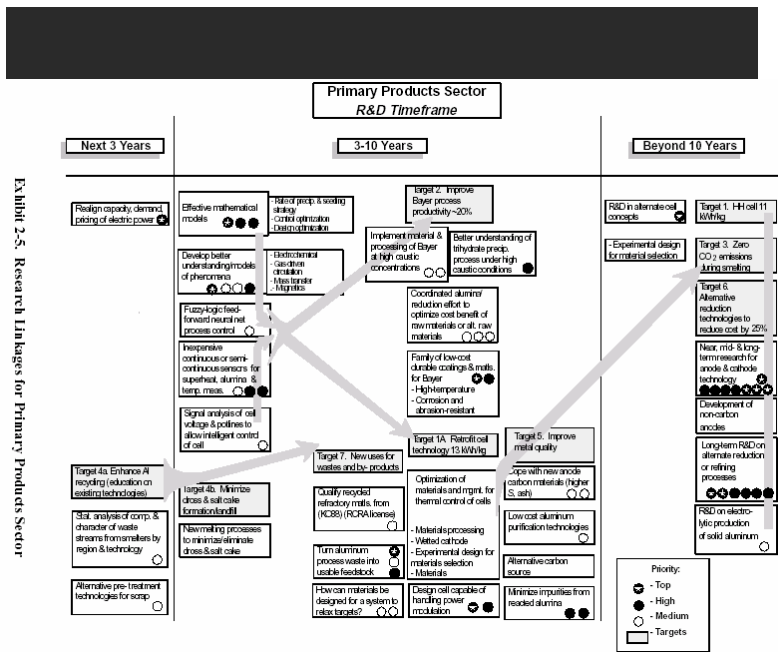



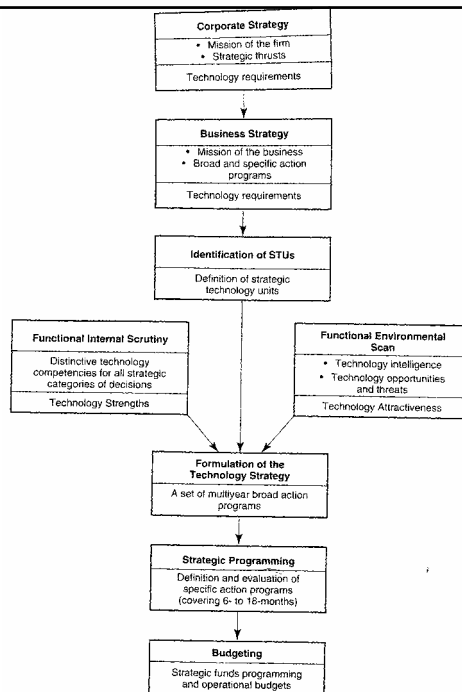
Exhibit 2-5. Research Linkages for Primary Products Sector



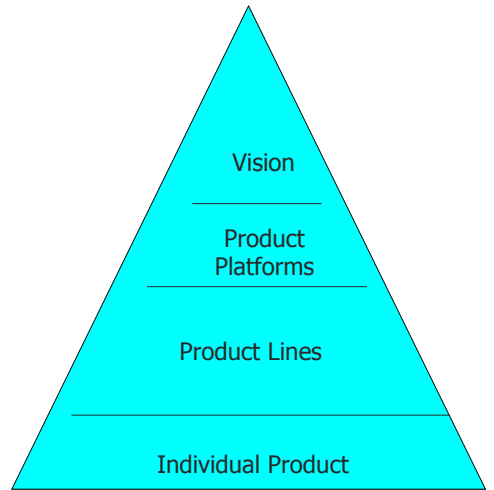
Technology forecasting

- 
- Single trend extra polation
 - Substitution analysis
 - Scenario development
 - Delphi method (expert ideas)
 - Cross – impeat Analysis (interaction of changes)
 - Morphological evaluation (selected & possible)
 - Structual approach (tree)

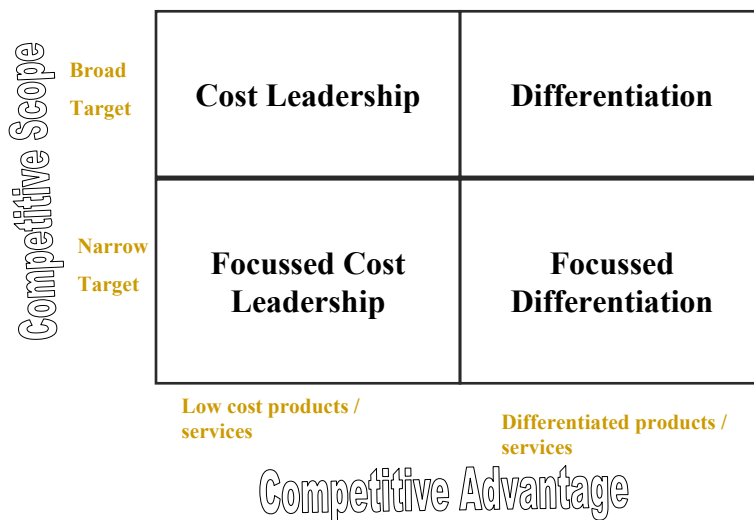
Technology strategy

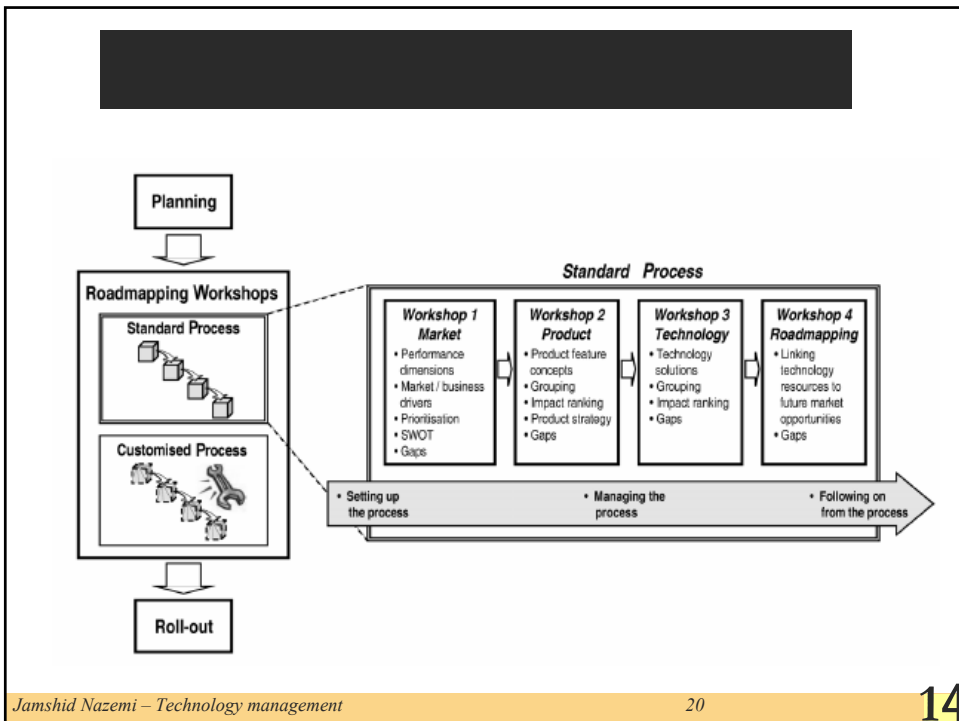
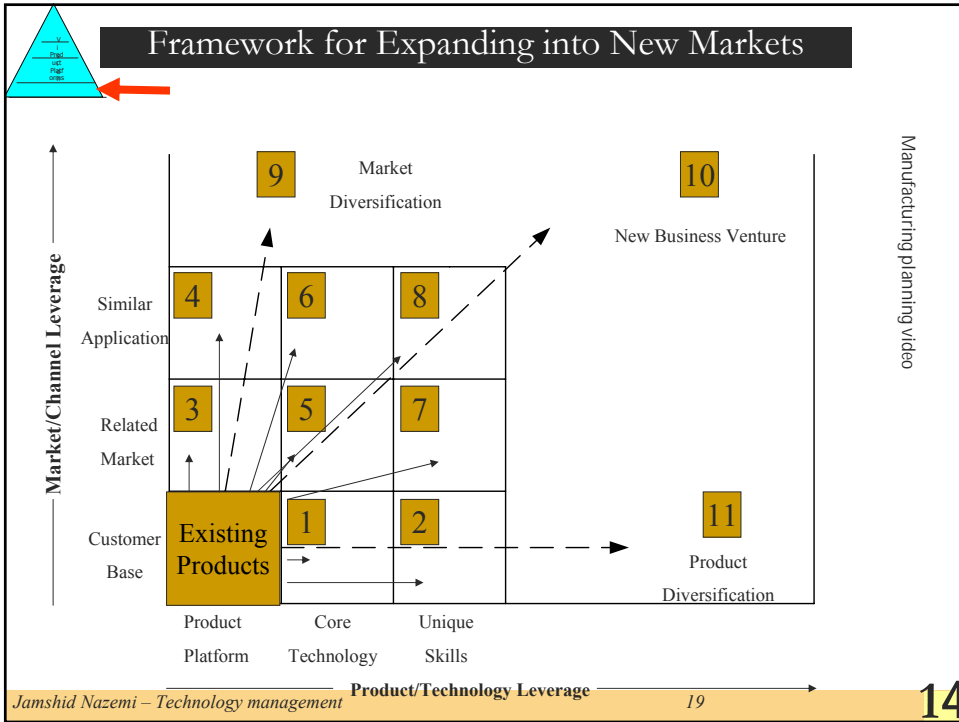


The Four-Level Structure of Product Strategy

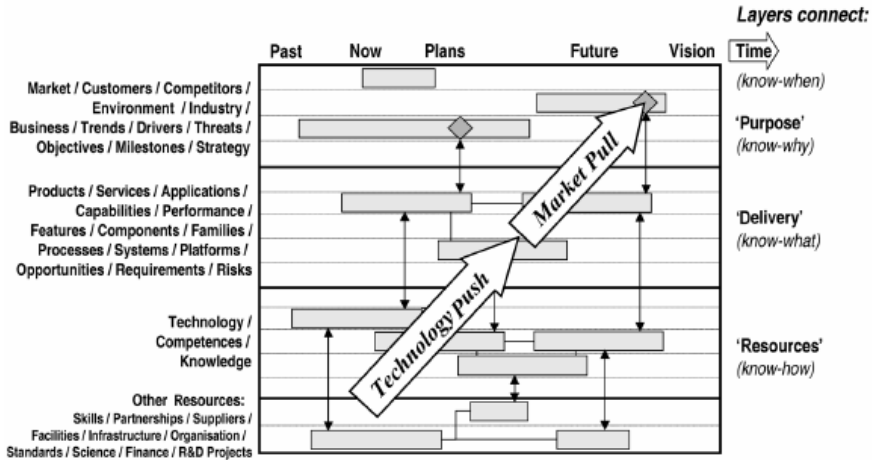


Porter's Generic Business Strategies

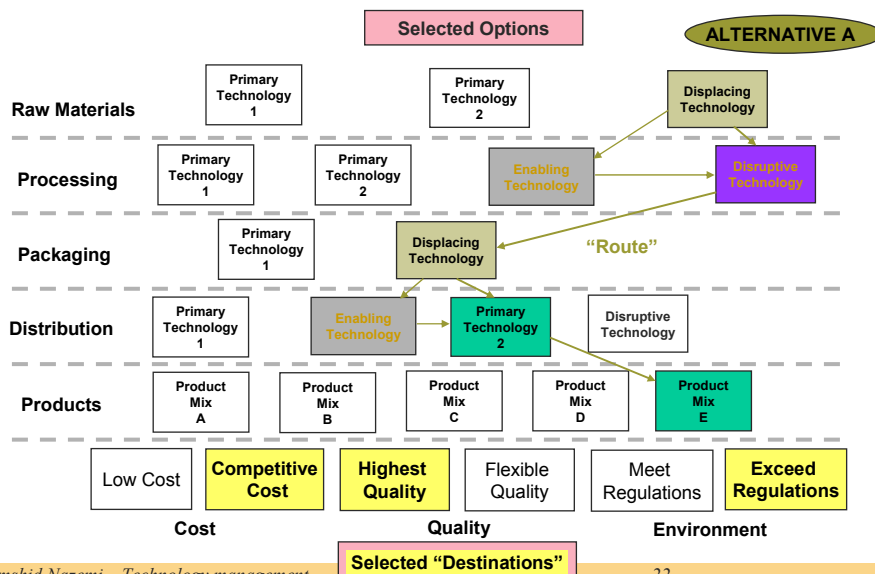




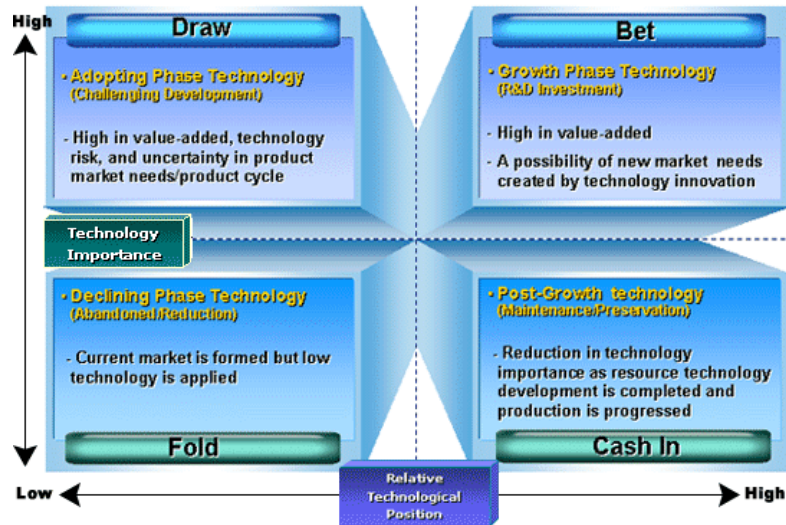
TRM



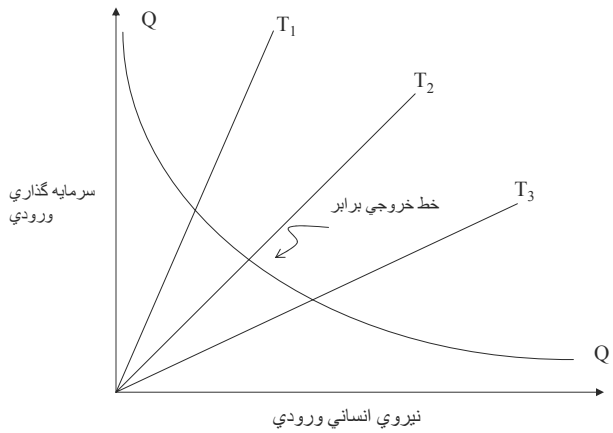
Select Technology Strategy Alternatives as Combinations of “Routes” and “Destinations”



*Corporate Technology Planning
Technology Portfolio Matrix*



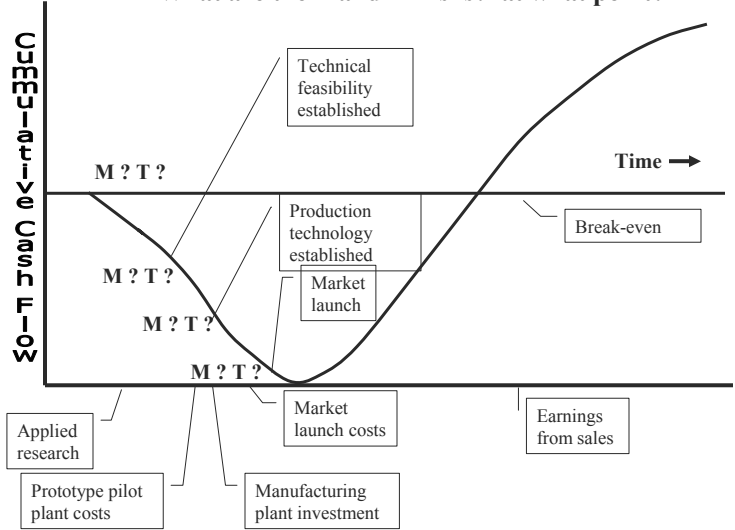
Economics of technology selection



=T1
=T2
=T3

Cumulative Cash Flow Diagram

What are the T and M risks? at what point?



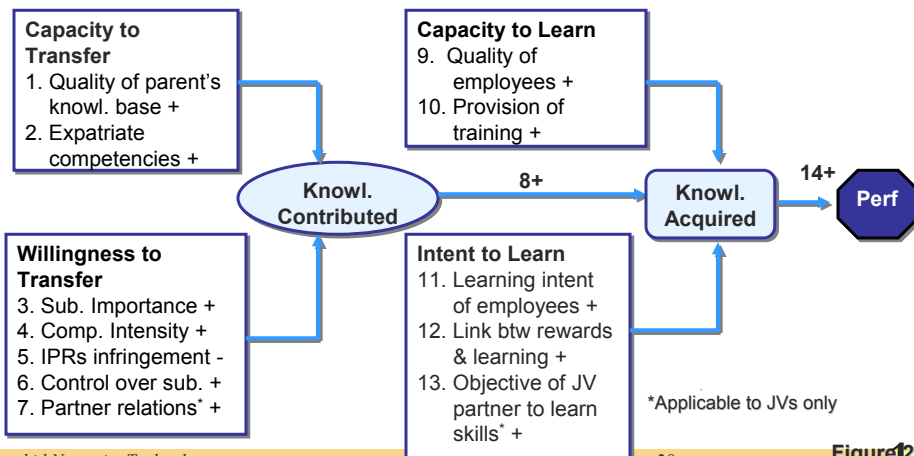
Technology transfer

تحليل عوامل و افعال در مذاكرات

Factors Affecting Knowledge Transfer from Foreign Parent to Subsidiary

Stage 1: Parent Contributes Knowl.

Stage 2: Subsidiary Acquires Knowl.



Task Definition

- Project planning sessions to flesh out WBS
- Single subject reviews to flesh out the activities
- Task estimation sheet used to provide detailed task inputs to PM

Major Deliverable: Atlas Analogue BCD PA Power Supply Integrated into PA Module									
Design Phase	Task	Description / Notes	Resource	Sub-Task Hours	Actual Hours	Days	% Loading	Dependent	Material Cost
Preliminary	concept & design through order of prototype fab								
1	BCD PA Power Supply Integration Mechanical Performance Design								
1.1	Thermal Design- Cold Plate	Liquid Cooling	ME	----	29	4.5	80%		
1.2	Thermal Design- PA Enclosure	Air Cooling	ME	----	29	4.5	80%		
1.3	Thermal Design- System Air & Liquid	Evaluation of system level air and liquid cooling requirements if characteristics are changed from Vicor PS version PA cold plate.	ME	----	9	1.4	80%		
1.4	Safety Design- PA Module Mechanical	Mechanical Hazard Prevention (per DP-300-04, Product Safety appendix D)	ME	----	3	0.5	80%		
1.5	Performance Requirements Document	air, liquid & mechanical safety related.	ME	----	4	0.6	80%		
1.6	Component Documentation & Procurement	cooling related items such as thermal interface materials, heat sinks, etc.	ME	----	6	3.0	25%		
1.7	Test Plan		ME	----	5	0.8	80%		

Managing innovation & improvement

