

How to Prioritize Needs

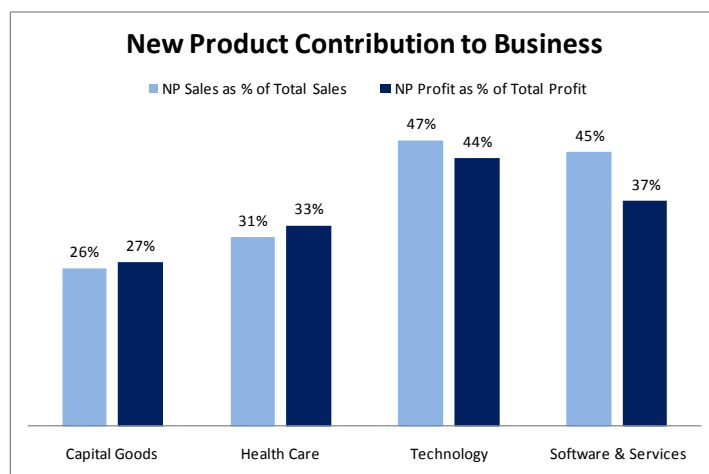


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Success requires recognition of the importance & value of new products.



PDMA Foundation New Product Development Report of Initial Findings; Summary of Responses 2004:
416 Responses; average of most recent 5 years

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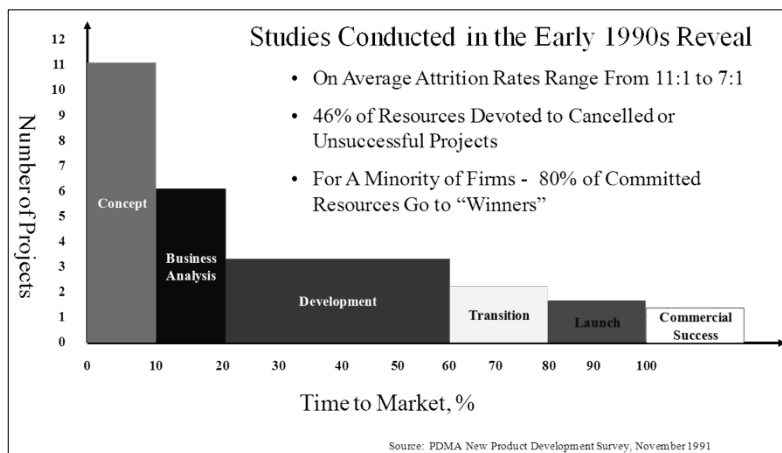
It appears that more focus is being made up-stream ... to ideation and development of sound business cases!

Success Differences	The Best	The Rest
% Profits from New Products	49.1%	21.2%
No. of Ideas for one success	4	9.2

PDMA Foundation New Product Development Report of Initial Findings; Summary of Responses 2004: 416 Responses

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Why Prioritize Needs?



*Although there may be unlimited needs, **resources are not unlimited!***

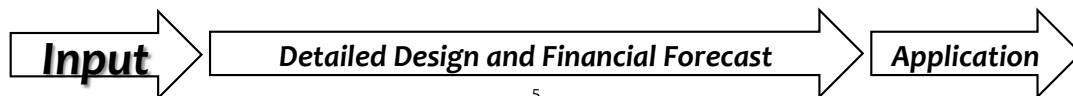
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What is a Need Specification?

o.o Need Statement

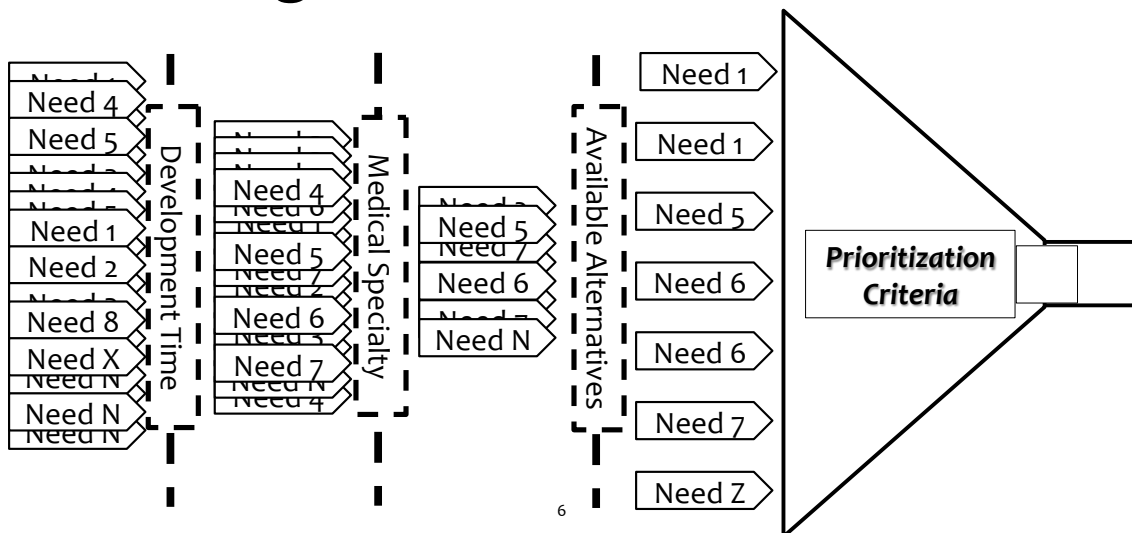
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|--|---------------------------|
| I. Background | V. Market Assessment |
| II. Significance | VI. Reimbursement |
| III. Current Methods, Technologies,
Solutions | VII. Freedom to Operate |
| IV. Stakeholder Assessment | VIII. Conceptual Design |
| | IX. Resources and Finance |

X. o.o Provisional Patent Application



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Filtering, Prioritization & Selection



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Criteria Definition and Scoring Table

Criteria	Definition	High Score Basis
Market Potential	Number of potential customers	Large market
Current solutions in the market	Number of existing competitors	Less solutions = less competitors
Quality of current solutions	How well the current solutions address the need	Solutions that don't address the problem effectively score higher
Impact of solution per individual	How does the solution impact the individual	Solution increases quality of life - higher
Problem Understanding	Understanding of the problem realm	Well defined and understood
Need Complexity	Complexity of the need	Simple
Urgency of Problem	Social demand for solution	Time sensitivity/high demand of interest
Anticipated Regulation	Cost and length of time to fulfill requirements	Short time and cost

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Criteria and Importance

Definition/Description	Scale
Equal Importance	1
Weak importance of one over another	3
Essential importance	5
Demonstrated importance	7
Absolute importance	9
Intermediate weights	2,4,6,8

	Market Potential	Current solutions in the market	Quality of current solutions	Impact of solution per individual	Problem Understanding	Need Complexity	Urgency of Problem	Anticipated Regulation
Market Potential	1.00	8.00	3.00	1.00	5.00	3.00	2.00	0.25
Current solutions in the market	0.13	1.00	0.13	0.14	0.33	0.33	0.14	0.13
Quality of current solutions	0.33	8.00	1.00	1.00	2.00	0.50	0.20	5.00
Impact of solution per individual	1.00	7.00	1.00	1.00	6.00	5.00	1.00	7.00
Problem Understanding	0.20	3.00	0.50	0.17	1.00	1.00	0.25	1.00
Need Complexity	0.33	3.00	2.00	0.20	1.00	1.00	0.14	1.00
Urgency of Problem	0.50	7.00	5.00	1.00	4.00	7.00	1.00	7.00
Anticipated Regulation	4.00	8.00	0.20	0.14	1.00	1.00	0.14	1.00
	7.49	45.00	12.83	4.65	20.33	18.83	4.88	22.38

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Relative Importance

	Market Potential	Current solutions in the market	Quality of current solutions	Impact of solution per individual	Problem Understanding	Need Complexity	Urgency of Problem	Anticipated Regulation		Weights
Market Potential	0.13	0.18	0.23	0.21	0.25	0.16	0.41	0.01	1.59	19.83%
Current solutions in the market	0.02	0.02	0.01	0.03	0.02	0.02	0.03	0.01	0.15	1.85%
Quality of current solutions	0.04	0.18	0.08	0.21	0.10	0.03	0.04	0.22	0.90	11.31%
Impact of solution per individual	0.13	0.16	0.08	0.21	0.30	0.27	0.20	0.31	1.66	20.75%
Problem Understanding	0.03	0.07	0.04	0.04	0.05	0.05	0.05	0.04	0.37	4.58%
Need Complexity	0.04	0.07	0.16	0.04	0.05	0.05	0.03	0.04	0.49	6.08%
Urgency of Problem	0.07	0.16	0.39	0.21	0.20	0.37	0.20	0.31	1.91	23.92%
Anticipated Regulation	0.53	0.18	0.02	0.03	0.05	0.05	0.03	0.04	0.93	11.68%
	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	8.00	100.00%

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40 Rough Cut Needs

Anesthesiology

1	There is a need for a way to measure arterial pressure that is preferably noninvasive	7	There is a need for a more efficient method of placing and securing an IV on a patient
2	There is a need for a more efficient method of logging given drug doses.	8	There is a need to overcome hypotension in chronically hypertensive patients for anesthetic purposes.
3	There is a need for anesthesiologists to view vital signs while placing anesthesia lines simultaneously in a patient.	9	There is a need to administer fluids into the body while reducing risk of infection.
4	There is a need to expedite the emergence phase for an obese patient.	10	There is a need to reduce fatigue of an anesthesiologist while performing a nerve block
5	There is a need for a way to reduce clutter of tubes, cords, etc on the OR and ICU floor.	11	There is a need to reduce irritation during ventilation for a patient with a smoking history
6	There is a need to ensure breathing for intubated patients that are heavy smokers.	12	There is a need for a less painful way to numb the skin.

40 Rough Cut Needs

Anesthesiology

13	There is a need to ensure drugs are not flushed out or built up during surgery	19	There is a need for a method to noninvasively administer a nerve block.
14	There is a need to maintain an ultrasound picture while simultaneously administering the nerve block.	20	There is a need for measuring hemoglobin concentrations bedside.
15	There is a need for a way to make the urine collector more accessible.	21	There is a need to regulate the behavior of sedated patients who are concerned about how they will behave.
16	There is a need for a way to quickly, easily, and accurately distinguish between the trachea and the esophagus which can be used by beginners.	22	There is a need to administration of anesthesia to a patient more olfactorily pleasant.
17	There is a need to limit potential blood loss during IV injection.	23	There is a need for a way to supply oxygen to a patient's lungs as naturally as possible.
18	There is a need to ensure unconscious patient is able to breathe once awakened.	24	There is a need to establish an airway comfortably before the patient becomes unconscious.

40 Rough Cut Needs

Anesthesiology

25	There is a need to improve the method of capturing urination for female patients.	31	There is a need to ensure that anesthesiologist remains engaged in monitoring
26	There is a need to minimize the amount of drugs used in anesthesia	32	There is a need to ensure muscle twitches (while using a nerve stimulator) are always observable, regardless of the patient.
27	There is a need to secure a laryngeal mask airway.	33	There is a need for a better method of placing oxygen masks on patients.
28	There is a need to determine where a shunt is positioned before administering a nerve block.	34	There is a need for a more effective way of adjusting the ultrasound image while maneuvering the ultrasound probe. (Same as 10 and 14)
29	There is a need to secure the airway without awkward and excessive taping to the face.	35	There is a need to administer long-lasting pain meds non-invasively
30	There is a need to limit the unwanted side effects of drugs	36	There is a need for a more efficient way of viewing ultrasound images.

40 Rough Cut Needs

Anesthesiology

37	There is a need to prevent nerve injury while administering a nerve block.
38	There is a need to ensure that air is not injected through IV.
39	During regional blocks, there is a need to prevent patients from moving.
40	There is a need to limit infections caused by catheter insertion

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Scored Needs

No.	Need	Total Weighted Score	Market Potential		Current solutions in the market		Quality of current solutions	
			0.1983		0.0185		0.1131	
			Score	Wt. Score	Score	Wt. Score	Score	Wt. Score
1	There is a need for a way to measure arterial pressure that is preferably noninvasive	44.40	80.00	15.86	70.00	1.30	20.00	2.26
2	There is a need for a more efficient method of logging given drug doses.	55.78	100.00	19.83	50.00	0.93	10.00	1.13
3	There is a need for anesthesiologists to view vital signs while placing anesthesia lines simultaneously in a patient.	73.75	100.00	19.83	90.00	1.67	90.00	10.18
4	There is a need to expedite the emergence phase for an obese patient.	48.19	80.00	15.86	50.00	0.93	50.00	5.65
5	There is a need for a way to reduce clutter of tubes, cords, etc on the OR and ICU floor.	78.81	100.00	19.83	20.00	0.37	50.00	5.65

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Prioritized Needs

No.	Need	Total Weighted Score	Market Potential		Current solutions in the market		Quality of current solutions	
			0.1983		0.0185		0.1131	
			Score	Wt. Score	Score	Wt. Score	Score	Wt. Score
5	There is a need for a way to reduce clutter of tubes, cords, etc on the OR and ICU floor.	78.81	100.00	19.83	20.00	0.37	50.00	5.65
3	There is a need for anesthesiologists to view vital signs while placing anesthesia lines simultaneously in a patient.	73.75	100.00	19.83	90.00	1.67	90.00	10.18
9	There is a need to administer fluids into the body while reducing risk of infection.	70.66	90.00	17.85	10.00	0.19	70.00	7.91
14	There is a need to maintain an ultrasound picture while simultaneously administering the nerve block.	70.25	70.00	13.88	80.00	1.48	80.00	9.05
36	There is a need for a more efficient way of viewing ultrasound images.	69.67	95.00	18.84	20.00	0.37	30.00	3.39