33 Thoughts on New Product Development

An exploration of ideas for building an effective NPD process for growing organizations, expressed in 33 short briefs of 400 words or less.

By Kevin L. Willmorth

"Product companies that continue to do what they have always done, with no clear path into the future - will eventually find themselves excluded from it."

K. Willmorth

33 Thoughts on New Product Development

Contents

33 Thoughts on New Product Development

Introduction

My experience is primarily with organizations in transition from small entrepreneurial entities to growth organizations. I have participated in the deployment of more than 400 products, and been awarded 14 patents, through approximately 11 companies. Sales results with these organizations exceeded competitors. My tenure in the organizations ranges from a few months under contract in marketing and NPD, various stints as a Design, Engineering, and Marketing Executive, and over 18 years as an independent consultant in a range of roles. I have had the pleasure of experiencing processes and approaches from many perspectives, with a diverse mix of talent and upper management styles. I have also witnessed organizations suffer from poor NPD processes that dampened their potential.

I can say with confidence that a common theme with every small to medium size organization, is that product development constitutes a particularly difficult challenge that frequently lets the organizations down. NPD, which everyone seems to recognize as being important, is rarely well executed.

The purpose of this little book is to share brief thoughts on the various basic dynamic components of NPD processes. These are not prescriptive, as there is no such thing as a singular formula for success. Every organization must find its own way. However, there are some core considerations that are necessary to include, which is where this collection comes into play. These are derived from notes and approaches I have utilized, that have been collected over 23 years.

There is one specific aspect of NPD that I have come to believe is essential. Success is built from formalizing process, carefully executed to aggregate sales growth and market positioning, that puts lesser competitors at a disadvantage. I have witnessed cases where the more organized and process driver organization eclipses the performance of near competitors by a factor of two to three.

I believe that a formal process driven approach produces sustained action. People guided by a clear process thrive from the clear vision of their purpose and goals. Organizations with solid processes are able to objectively evaluate performance of those involved and make objective choices that shape their future. Process removes confusion, provides guidance, and establishes responsibilities throughout the organization.

In organizations making the transition from small entrepreneurial entities to growth organizations, those who put in place formal NPD approaches and treat it as a high organization-wide priority, realize the greatest result in both growth and profit. Many eventually lead their product segment, over less organized competitors.

The following 33 thoughts, limited to 400 words each, are derived from my aggregated experience and effort to make NPD more efficient, faster, and more effective. These are neither comprehensive nor prescriptive. Rather, the thoughts here are offered as an outsider's perspective of elemental considerations to build fresh, enhance, or improve existing approach. From these foundational elements, more complex and comprehensive programming and process sophistication can be built.

On Culture and Change

Do you have a culture that embraces New Product participation as a priority?

Many give lip-service to the idea of NPD being a priority - that don't have an NPD culture. Since cultures are not created, but formed from a combination of management direction, individual perceptions, and staff attitudes, embracing NPD is an opportunity to excite and invigorate an organization's culture.

NPD is often seen as a source of time management conflict, that culminates in project delays. When operations sets aside product development work to meet daily shipping goals, purchasing pushes back on assistance with component sourcing due to being "too busy," or sales is allowed to miss task deadlines, to pursue "higher priority" sales activities - the culture of the organization will reflect this as being hostile to NPD. When management is reluctant to include NPD in company-wide goals or assigned responsibilities, and fails to enforce NPD priorities, the negative cultural attitude is further solidified.

NPD is, by its nature, not a "today" activity, it is a "future" activity that is necessary to the long-term success of every organization. To overcome the gravity of the "now", NPD requires active participation throughout the organization, supported by management. Failing this, products development projects will experience a cascade of delays that result in missed release dates, incomplete development steps, and frustration for everyone. There is no escaping the inevitable - delays in new product releases result in revenue losses that compound over time.

A culture favorable to NPD sees it for the important role it plays in growth. Leading companies across every industry have applied this well - to the detriment of their competition. Small organizations that have not embraced this, find themselves with slow NPD development, poor performing or unprofitable products, and a state of disrupted, frustrated, and constantly changing NPD priorities that worsen an already poor condition. Eventually, the inevitable result is stagnation in sales, if not outright decline, as their competition takes advantage of their weakness to get ahead of them.

Change in culture may cause stress for those comfortable with their existing workload. There is always an immediate time demand to pull attention away from the future. If senior management fails to communicate the goal of integrating NPD into the organization overall to encourage voluntary and enthusiastic cooperation, NPD will suffer.

Some many even view the assertion that NPD is a high priority as the myopic opinion of product development professionals. It is an easy dismissal, often cited. Because of this, the real question may be"

"Does the organization have the will and appetite to embrace a New Product Process that excites, engages and advances the culture of the organization?"

Perhaps this small offering of ideas might help you find a path to answering this in the affirmative, to realize the success that comes from making this transition.

1 - Keep it Simple

The simpler a process is, the easier it is to train members, adhere to, track and monitor.

Removing complexity produces a process that is readily understood by a wider audience of contributors. Streamlining seeks to increase efficient use of time, by concentrating effort on the most essential work, with no extraneous waste. Simplicity also enables clearer communication between participants.

While the concept of simplicity seems straightforward, it may take longer to create a streamlined process than one with more considerations. Initial drafts of a process should include every possible "need" imaginable, across all segments of an organization - to be cut down to the essential needs. The intent is to be thorough in order that all possible considerations are captured, then judiciously removing unnecessary complexity, or finding alternatives to make the work cleaner.

Simplicity includes inclusion of: Departmental interactions; Task definitions and steps; Approval requirements/gateways; Reporting expectations; Dependencies; Functional definitions; Series and parallel process definitions; Goals; Management directives; and any other consideration to satisfy the concept of a complete development process from inception to market realization. Once collection, group and prioritize as: Critical (cannot be avoided); Necessary (to support inter-company functions); Nice to have (adds value but is not critical to completion); and Avoidable (items that can be eliminated without harming project completion.)

Ultimately, the output of this refining and streamlining process is to create the dynamic components of a process under the following definition categories:

- Work that establishes the project or product definition, goals, and objectives.
- Facilitation of data collection and interpretation necessary for proper project definition.
- Items required to support inter-company coordination.
- Task steps necessary to produce the product itself from concept to production.
- Communications necessary to provide visibility of project progress and issues.
- Coordination to ensure that all dependent and related members are in synch.
- Project steps and definitions of completion (done) of each, by department.
- Evaluation of the results against the original definition, goals, and objectives.
- Procedures for corrective actions, and recovery of failures or delays.

Further refinements can be made to create specific process steps and tasks, reporting and tracking. The cleaner and simpler this is, the more effective it will be. A process manual should be created, distributed, and referred to regularly to guide progress. Further, refining and streamlining should be considered a regular activity - to improve and clarify and further simplify the process on an on-going basis.

2 - Defined Clarity

Defined Clarity is the act of supporting simplicity through elimination of ambiguity and confusion.

Be clear and define the work required to deploy a new product as early, quickly, and as thoroughly as possible. This requires investment in establishing the target and intent of the product, written in clear terms, with "Needs", "Wants" and "Customer Critical" specifications, competitive conditions, market factors, compliance details, sales considerations, budgeting, sales goals, and impact on existing product mix defined. Sharing this allows everyone involved a clear picture of what is being pursued and why.

Defined Clarity also means establishing constraints of a project to avoid mission creep and specification expansion unnecessary to successful product realization. All interactions between the defined offerings should be set, with rules and limitations established to avoid improper combinations, customer service issues, operational disruptions, and post-sales processing issues.

Simplicity and clarity work for customers as well. The cleaner an introduced product is, the easier it is for them to recognize its value. Adding new versions, options, or features as the product matures is a part of ongoing product management. Fewer sales are lost from missing small add-ons, than by confusing the core product with extraneous puffery of little value.

Defined Clarity provides guidance to the product team and all effected organizational entities. The definition also serves as a diary of the product's inception and development for future reference.

The elements of Defined Clarity vary by project. However, there are fundamental considerations and questions to be addressed that apply universally:

- What, specifically, is the product?
- Who is the specific end customer and how will they gain access to the product?
- How does the product fit within the company's existing portfolio and market position?
- What value will the product offer the customer?
- What features and accessories are necessary to deliver the intended value?
- How is the product to be placed competitively against similar offerings in the market?
- If the product is new to the market, what customer defined demand or need is it to serve?
- What are the technical requirements of the product?
- What are the projected revenues to be attained from sales of the product over its first 5 years?
- How much will the company invest to realize the revenues estimated?
- When does the product need to be introduced to the market?

Product definitions can be simple, or highly detailed. The primary goal is to provide a clear picture, up front, of the end product, and what metrics will be used to judge it complete and ready for market.

3 - Avoid Shortcuts to Chaos

Simplicity does not mean taking shortcuts around proper process.

Jumping from an idea, a sample, or sales opportunity request, into an abbreviated quick to market product, launched without definition or evaluation, creates chaos and inefficient NPD behaviors:

- Products that jump from idea to market, require finishing development within the window of customer order delivery expectations. This will always lead to compromised engineering and design.
- Shortcuts result in disruption to operations, lower profits, and a constant state of revision to correct errors from rushing development.
- The effort of keeping up with a product line filled with incomplete documentation, confused engineering, and production line disruptions, will consume more time than would have been invested in a proper product development process.
- Shortcuts result in the lowest value items consuming roughly the same effort as high value items, muddling profitability, and disrupting progress in deploying higher value products.
- Products developed on an as needed to respond to pre-sold products in support of production, are subject to inconsistencies and failure to build continuity. The result is inconsistent quality and inefficient production.
- Product lines that are launched with rushed inclusion of options and accessories that have not been fully vetted, result in confused customers, customer service conflicts, and impossible to resolve engineering and production failures and disruptions.

With engineering and operations focused on dealing with daily issues caused by under-developed products, time is diverted from more robust new products. The shortcut approach, and lack of organization participation, reduces new product introductions and results a volume of items lacking objective qualification. The result is reduced income from operations. Further, the natural response to fixing shortcut deficits is to introduce more shortcut products. This doubling down on a bad process leads to an explosion of issues in a death spiral of inefficiency and chaos - for disappointing income results.

Shortcutting also creates a great deal of ambiguity in the product line, as products are thrown into the offering without objective consideration of market position or customer perception. This reduces the impact of all products offered, as they appear unclear, muddied by under-defined and weak messaging.

The most direct path to effective NPD introductions, is through an investing an appropriate amount of time to attain Clarity through Definition, using a streamlined process that is well documented. Modern markets are filled with unfocused voices vying for business, throwing everything at it in hopes of snaring a sale. In this noisy universe, the clearest, most sharpy tuned voices attract more attention from customers seeking relief from the cacophony. Short cuts are not the path to them. Clarity and focused process is.

4 - Speed to Market

Speed to Market does not mean rush and shortcut to market.

Many interpret "speed to market" means rushing products into markets without formal process consideration. This extends to thinking that an incomplete and imperfect product is preferable to "wasting time" on creating a completely developed offering - leaving details to be addressed later. This is just rationalized shortcutting, with all of the same liabilities.

There is certainly a need to move products into the market as quickly as possible. The less time spent in development, the sooner the product can begin to generate revenue. However, there is also the reality that growth comes from pursuing the highest caliber opportunities that reach deep into markets, no through collections of small offerings that have no significant impact. The difference of invested time is not as great as proponents of short cutting believe.

If properly formulated, a new product process is streamlined, employs simplicity over unnecessary complexity through defined clarity. This delivers the most rapid pace of market releases - of qualified, vetted, well developed products - that create minimal negative impact on operations, and the highest income from effort invested. Speed to market is an underlying tenant of pursuing a robust NPD process, not an excuse to work around it.

The question of releasing imperfect products is an academic point made to rationalize short cuts and avoid the real work of NPD. There is certainly a need in the development process to differentiate between effort being made to be "perfect" and the necessary work that ensures a product is developed well enough to be released. Allowing the definition of "good enough" to float, based on urgency of opportunity with no formal process, is a path to ambiguity, wasted effort, and lack of clarity with the target customer.

Speed to market is also not a simple concept. The speed with which a product is deployed is conditional, founded on the following basic considerations:

- Is timely to the needs of the target market environment.
- Aligns needs and wants of customers with delivered product.
- Is a fit with expectations and perceptions of customers, to facilitate market absorption.
- Has a path through sales channels to deliver produced value to customers.
- Avoids delivery delays, quality issues, and miss-communications that slow absorption.
- Is well timed to realize the strongest response to the product.
- Is accompanied by clear messaging throughout, from company to customer base.

Delivering an under-developed product too quickly, at the wrong time, without clarity leads to disappointing results. Taking the least amount of time practically possible, to release complete, well developed products in line with customer expectations - is the very foundation of Speed to Market .

5 - There is no Progress Without a Roadmap

The core of every NPD program is the Product Roadmap.

The product roadmap sets out the forward thinking of the organization, goals, and disposition of existing products in a single, clearly presented timeline. From this, product management and development work can be deployed.

Roadmaps are derived from the following considerations:

- Company strategic planning.
- Budgeting.
- Market and Sales goals, objectives, and timing related.
- Competitive intrusion and response.
- Market factors impacting current and future success and opportunities.
- Opportunities identified to add new value.
- Rationalize and evaluate considered projects in context to one another.
- Continuous improvement needs and profit improvement.
- Product obsolescence and revenue recovery.
- Future opportunity identification and development.

When projects are aligned and rationalized within a proper roadmap, supporting considerations can be fully evaluated, such as: staffing needs; facilities capabilities and capacities; communications requirements; release timing; marketing and sales tasks; inter-departmental loading; inventory management and; resource planning.

Failure to create and continually refer to a roadmap results in subjective seat of the pants decision-making, which leads to lack of coordination of efforts across organizational functions and losses in efficient process of product management. In other words, without a product roadmap, there is no product management, or NPD program, just products being tossed into the market like pennies in a wishing well, hoping that one delivers the wished upon result.

Product roadmaps should be considered flexible enough to include fresh thinking and new information, but not so flexible as to become a source of confusion and constant shifting of priorities. For this reason, roadmaps should be reviewed regularly for progress, but less frequently for the programming aspects, perhaps no more than quarterly. Changing project priorities or trajectories frequently should be avoided.

The product roadmap should also be shared with as many members of the organization as possible, within the constraints of protecting proprietary or confidential content. As it is with simplicity and defined clarity, the more that people see of it, the greater the power the roadmap will have in keeping programs moving and processes flowing. Holding this information too closely reduces its effectiveness in guiding efforts of the entire organization.

6 - Trust of Management

Trust from Senior Management is a critical factor in the success of New Product Development.

Leading the organization through the numerous required stages of development requires senior management (company owner, CEO, or board of directors) to trust NPD leadership team to build and execute the process - or it will never succeed. When a high-level manager intercedes with changes in direction, micro-management, or working around the process, it is demonstrating a lack of trust that saps interest of those involved. This is common in closely held organizations that are dependent on a single owner entity who act as a singular path for direction, and approvals. However, an overly zealous CFO, or COO protecting daily production schedules can be just as disruptive.

If there is a persistent threat of projects being re-arranged, cancelled, re-defined, or interrupted by a higher-level authority, chaos will creep back in, and planned projects will stall. Further, if the need for inter-department interaction, coordination, and participation is similarly interfered with - either by blocking participation or de-emphasizing it, any NPD process will dissolve.

Micro-management has no place in NPD processes. The path to simplicity and speed is through: cross-functional processes; defined clarity; and roadmaps. These demand support of management to: execute the numerous tasks involved in a timely basis; keep projects on track; and deploy robust new products to market. This means addressing all aspects of importance to the Executive Management team at the beginning of every project, followed by consistent and regular progress reporting. This allows all participants to work efficiently with minimal distraction.

When instances arise that are not aligned with expectation, senior managers should engage their assigned leaders and work through the issues with them, in such a way that continuity is maintained, while finding paths toward making requested adjustments, recover lost time and/or opportunity. Failing this, through senior management take-control intrusions or redirecting team activities, results in the demoralization the leaders assigned. This will lead to a break down in reciprocal trust, where the leader no longer trusts the superior to support them. In most cases, the ultimate result is the loss of key talent, first in morale terms, then by seeking a position outside the organization. The loss of continuity and progress, disrupts progress and creates more work and stress - enemies of enthusiastic participation.

Trust is a difficult thing to confer on another. Senior managers often struggle with this, especially in closely held organizations. However, trust is the foundation upon which entire cultures are built. Trusted managers perform at a higher level, and with greater effectiveness, than those managed so closely they feel they are just executing assigned tasks. Cultures emerging under trusting management also experience higher total performance and greater retention of the team members being led.

7 - NPD Leadership Traits

Every NPD process demands a strong, skilled, enthusiastic, well-organized leader.

There are far too many aspects to NPD processes that are necessary to efficient function, outside the leader's direct responsibility, to be managed through micro-management. For this reason, the NPD process leader must be someone who steps back from details to oversee, direct, and facilitate the performance of a wide range of tasks, by both direct reports and through other managers within the organization.

An exceptional NPD leader will exhibit these traits:

- Will instill trust in direct reports that they are doing the job they are being asked to do.
- Instill trust in other managers in the organization to cooperate in good faith.
- Instill trust in senior management that they are delivering what they were hired to do.
- They will seek advice and involve others in problem solving.
- They give and allow others due credit for accomplishments openly.
- Can communicate the NPD process and its projects in a narrative form that inspires others.
- They stand behind and support all involved in the process and assist to see them succeed.
- They will show appreciation for accomplishments.
- They take credit for their own mistakes and those they have caused others to make.
- They will respond to needs of the organization and management in a timely manner.
- They will show respect and demonstrate they care about others involved.
- They will extract greater performance from the organization, by challenging and coaching.
- They will be respected by subordinates throughout the organization as respectful and helpful.

While inspired leaders may be guilty of enthusiastic expression, they do so with humility and respect, in a way that allows them to be a source of energy that causes organizational members and peers to willingly participate in the process of executing the myriad of NPD project steps, leading to successful deployments with minimal negative impacts. A strong NPD leader will aggressively defend the NPD team and processes they are employing, as there are no other organizational members to carry out this necessary function,

NPD is too often seen as a secondary function. So, when production or other work of considered higher priority causes NPD to be set aside for later, NPD schedules fail. This leads to down-stream failures to meet roll-out timing, delayed introductions, missed market opportunities, and a collapse of process trust. To avoid this, the NPD leader must be supported in keeping new products high on other managers priorities lists, and to find paths to execute process steps that maintain continuity and scheduled completion. This requires executive management support, as well as relationships the NPD leader builds with other managers. The combination of the two allows the NPD leader to support his charges in their efforts to keep projects on track, and to see effective releases occur on time, and on budget.

8 - Meetings and Proceedings

A key component of reducing complexity and increasing efficiency is to stop holding time wasting, brain draining meetings.

Meetings are unavoidable. However, there is an approach for keeping them short, on track, and focused. Every meeting needs an organizer, who shares the following with everyone prior to the meeting:

1. Summary of the 5 W's.
   a. What the meeting is about - topic specific
   b. Who will be asked to present information?
   c. Where the meeting will be held
   d. When the meeting will be conducted
   e. Why the meeting is being held (decisions to be made)
2. A brief statement of issue to be resolved in the meeting, what answers are needed, and what information is needed or to be provided.
3. A list, by attendee, of what will be prepared in advance and distributed to the attendees for consideration in the meeting.
4. A set time limit for the meeting proceedings (preferably 60 min. max.), including presentation times.

At the conclusion of the meeting, the organizer should summarize the topic(s) discussed, conclusions, etc. and gain agreement from all attendees that the conclusions are accurate. These notes would then be shared, with the agenda and attendee contributions, to all other NPD participants, to assure that everyone is kept informed - even when it might seem they are not impacted. Trust is founded on inclusion.

Ad hoc meetings called with little notice should be banned. Without prior arrangement and preparation, and verification that all related parties will be in attendance and prepared to discuss the topic, all that is accomplished with ad-hoc meetings is a collection of busy people frustrated with the interruption, with nothing to work from, to no obvious end-result.

Unplanned meetings can, however, serve well at the task level, to draw a few team members together to decide a course of action, expose an emerging issue, or to explore ideas to solve a problem in hand. In this, the attendees are limited to those directly involved. Generally, meeting notes would be taken and shared with the rest of the organization involved, to avoid the "Oh, we met on that and decided to..." comment, which is rarely taken positively by those feeling dismissed or left out.

Meetings are a necessary component of teamwork and progress. Long meetings without structure, organization, preparation, or definitive intended result, are not. Several short meetings, with time to investigate, discuss and prepare between them, are far more productive.

9 - End the Use of Email Chains for Communications

Clear, open, timely communications is critical to making NPD processes work and stay on track.

While use of email has been a go-to channel for some time, it is no longer the best approach. Email communications are simply too volatile and disorganized to be relied upon. Use of email as a means of discussing an issue should be banned. Email is not a chat forum. Email communications are virtually impossible to monitor, track and manage. Further, miss-communication and disagreements are caused by email more than any other communication method.

Far better team and organizational communications can be found in MS Teams, or similar applications (such as Cisco Jabber, Webex, Avaya, Airtable, Zoom, Slack, Monday, Team Viewer, etc.) These team-based applications offer document libraries, progress tracking, meeting facilitation, contextual communications with threaded discussions, meeting organization, and information exchange areas, that are inclusive of individuals local and remote alike. By exposing discussions in context - with threading, references to team documents, and meetings - results in dramatic improvements in the quality of information shared, and communications effectiveness.

Abandoning email will eliminate the following common email messages that kill progress, team building, and process effectiveness:

- "Oh, I sent you and email, so I figured you knew."
- "I must not have been copied on that can you re-send it?"
- "You didn't send email me on that, so I assumed it was okay."
- "I haven't checked email yet, what was it about?"
- "I have so many messages in my in box, I missed that one."
- "I sent you an email requesting that, and you didn't respond."
- "I read your email and didn't see that mentioned anywhere."
- "You shouldn't have copied everyone on that, it wasn't meant to be public."
- "Send me an email, I will get back to you then."
- "The file you sent me was an older version, I have one with updates, let me send that to you."

All of these are failures in communications, or intentional stalls, that use the overly informal email channel to deflect or excuse inaction. Team applications, which are open to all NPD team members, eliminates informality, organizes communications, and eliminates the need to send files back and forth, facilitating document revision control in a central source library.

A related communications channel that has now become obsolete is the wired desk phone. NPD processes that are constantly stalled for hours waiting for connections to be made, is an inefficient process. Having individuals carry mobile phones, that can be texted or called directly, is a superior approach.

10 - Strategic Planning and NPD

Strategic plans create a big picture scaffolding on which the organization builds its many tactics and sub-strategies.

Too many strategic plans fail to provide proper guidance for those impacted. Goals of desired increases in sales, or profits, to be attained at some nebulous point in time are too general to be of real use. Targets of increased sales, improved profits, or growth from new products, are too generic. The same applies to "Mission Vision Statements" with overly general lofty wording, and "Core Values" summaries, that just state obvious facets of any organization.

For any NPD process and related up-stream and down-stream actions to be effective strategically, the following are critical components of an effective Strategic Plan, founded on a proper Product Roadmap:

- This is our core customer (end use purchaser) and how we will address their needs, with description of products, services, and support to maintain and grow loyalty and sales revenue.
- Our current products are perceived as "A" and we intend to <Maintain>, <Change>, <Augment> that, by taking "B" Action(s).
- We intend to grow sales through the addition of new products that produce new revenue of "$C" in Y1, Y2, and Y3, with an investment of "$D", that <Support>, <Augment>, Expand>, <Penetrate> our <Existing>, <New>, <Emerging> markets, with net earnings of "$E", with an impact of less than "$F" in lost revenue from cannibalization of existing products.
- We will address declining interest in "F" Products through <updates>, <obsolescence>, <updates>, <replacements>, to recover projected losses of "$G" while increasing income by "$H" through continuous line improvements.
- We will address the <emerging>, <growing>, <existing> intrusion on our "J" product lines, through <Marketing>, <Product Improvements>, <New Product Introductions>, that will increase revenue by "$K", and reduce competitive intrusion on existing product line success.
- We recognize that changes in <regulations>, <standards>, <market conditions>, <customer preferences/interests>, and emerging <demand>, <interest>, <movement toward> the use of "L", require us to address our <product>, <services>, <sales channel>, <communications>, through a combination of product and marketing actions, that include <LIST>, at a cost of "$M" to realize future sustained growth of "N".
- We will address profitability by "P%" through application of product cost reductions to include <sourcing>, <Inventory reduction>, <product engineering> and <other action>.

These are just a sampling of the type of strategic plan statements meaningful and specific to NPD process development. These statements are not only specific, but they also set out specific targets addressable by NPD. Without this, a strategic plan is nothing more than a vague wish list of undefined objectives.

11 - SMART Goals Revisited

The definition of goals needing to be Specific, Measurable, Attainable, Realistic, and Timely, are well work guideposts.

While the basic tenants of S.M.A.R.T. goal setting are well established, there are several derivatives of that include "Relevant" in place of "Realistic", "Actionable", or "Accountable", in place of "Attainable", and "Time Bound" in place of "Timely". In this case, the differences in word use are subtle, but important.

"Attainable" is a general assessment of whether the goal can be done within the organization, either as it is, or as it intends to be, so is perhaps too vague, and limiting. "Accountable" is a better term, as it demands that the goal be held to some standard of tracking and use of resources to accomplish the intended result. "Realistic" is a generalization that assumes the goal is set within the limits of the organizations existing boundaries, or its perception of the work to be done. "Relevant" can apply to both the attainment of organizational goals, and to the targeted customer base, which seems more important. "Timely" can mean that it times the market need well, or it can mean completed within a vague period. "Time Bound" infers there is a time limit and prescribed completion date.

In reference specifically to NPD, the term "SMART" should start with the assumption that before a goal is even set, it has already been rationalized as **Achievable**, **Actionable**, **Realistic**, and **Timely** to the need of the organization. This leads to a more effective summarized of SMART goals qualification as follows:

Specific	This is consistent with the concept of Defined Clarity, which encompasses the intent of seeking simplicity over unnecessary complexity or suffering the inefficiency of ambiguity caused by undefined or shortcut activities.
Measurable	This s further supports the idea of having clear definition of the product to be pursued - which establishes the benchmarks to be met and progress steps toward them.
Accountable	This establishes that all effort, all investment and expenditure of time and resources is being set and tracked within an established process or budget.
Relevant	This establishes that a specific goal or target is relevant to some other effort, which can mean customer achievement, organizational goals, or to the overall strategy of the organization. To add clarity, there may need to be an inclusion of a description as to what the goal is relevant to.
Time Bound	This sets out a specific timeline for the product to be addressed, which ties it to the strategic foundation, as well as creates a basis for defining expectations for the resulting end-product.

12 - Getting Past the Fear of Culling

Products left in product offerings past their sales and market viability, produce distraction from the success of the company.

When customers see offerings filled with items that are no longer desirable, they are left with the impression of an organization that is out of date and not forward thinking. Further, the clutter of these older items conceals new products. This also applies to organizations who have taken the approach of presenting too many variations on a common theme, where product lines are inflated unnecessarily in the attempt to create the impression of complete soup-to-nuts coverage of a given category. While this may have made sense at some point, in the noisy modern marketplace, this is no longer is a legitimate strategy. Too many products of similar characteristics, flooding web pages with a plethora of choices, and retained obsolete items, only serves to bury the most attractive products.

Culling is a necessary process of eliminating offerings that are either no longer in demand at a volume that supports the inventory and support required for them to remain, products that no longer represent the company's image or strategic direction, and items cluttering the view of the company's core value to the customer. In a universe where customers are overwhelmed with choices, presenting them with irrelevant clutter blocking their path to products they are seeking, is counterproductive.

In the case of organizations desirous of changing or improving their market image or position, culling will include removing products that no longer represent their strategic direction. In organizations that have collected numerous under-developed short-cut products, causing internal chaos that is inhibiting their ability to serve active customers, culling is the path to redress and correct this behavior. Every product eliminated that is drawing on resources that could better be utilized to introduce proper new products, is a significant gain. Removing disruptive, chaotic products and replacing them with those created with defined clarity, is a superior approach.

Clinging to old products burdens the organization with slow moving inventory, unprofitable support demand, unnecessary product line complexity, and loss of customer enthusiasm. New products should also be included for cull consideration. New introductions that have not produced the intended result should also be reviewed and either improved, re-marketed, or removed. Setting a minimum sales threshold that establishes a break point between products to be retained, and those to be removed, is often a good first step.

The process of culling is an ongoing product management function. Each year product lines should be reviewed for viability, line item by line. This will set out which have no opportunity to recover - which should be culled. Remaining line items should then be reviewed for improvement, or maintenance, based on the prior year's performance and support demand. All changes should be clearly defined to ensure they are pursued objectively. All these considerations are reflected in the Product Roadmap - to maintain perspective as to what the ultimate goals and strategic planning connections are.

13 - Knock Down the Petards

Organizational compartmentalization that blocks participation in larger cross-functional teamwork, will negatively impact NPD progress.

When departments and functions are operated as discrete entities, reportable only to the highest management level, a culture of non-cooperative behavior is created. These petards create a minefield for NPD process, as the demands for work involving cooperation and coordination from several functional areas, not under direct control of the NPD leadership, must then be negotiated independently, department by department. This leads to progress being subjected to unpredictable behavior.

The ideal condition for NPD to thrive, is when all related and impacted functional areas are responsive to common goals. This starts with Senior Management establishing NPD as a priority inclusive of discrete departmental functions, including the assignment of responsibilities and performance metrics based on supporting work participation.

The most effective way to ensure that conflicts of interest between departments and NPD goals are kept to a minimum, is to provide full visibility of the NPD process and work in process. This provides ample opportunity to schedule supporting activities. The concept of defined clarity, Simplicity, Roadmaps, Strategic Planning, SMART goals generation, proper communications, and facilitation of meetings that are clear and concise - produce a composite environment in which all activities progress in a timely manner.

To this end, when organizational entities put off work that supports NPD, based on that work not being made part of their functional goals, NPD is culturally classified as a nuisance activity to be avoided. Meeting delivery deadlines for customer orders at the cost of quality control, customer service, inventory control, and NPD progress - are a formula for eventual failure of all interconnected activities.

To integrate NPD processes company wide, requires just that. Each department that has a role in the NPD development process, should have NPD project support included in their departmental metrics. This is facilitated when the NPD process is well defined, communicated well, represented with a clear Roadmap, and led by someone willing and able to encourage participation from those outside their direct reporting responsibility.

The reluctance to work on NPD projects when they detract from the immediate need to support sales fulfillment, needs to be augmented by realization that the choice is not binary, it is inclusive. Enthusiasm for New Products is as important to the organization's future as immediate sales satisfaction. In the long term, NPD is a critical function for the entire organization, that demands cross-functional cooperation to over-ride internal compartmental sovereignty, supported by senior management.

14 - Product Development is a Whole-Company Experience

New product development is not the work of one departmental, it is a whole-organization activity.

NPD is a costly process that is a draw on profits until the resulting product is realized and begins to return revenue from the invested effort. This means that the profitability of the entire organization is negatively impacted by development projects that are not yet be released to the market. Further, when NPD is not an inclusive pursuit, the time spent pushing work through the system, training organizational members after the fact, managing the impact of poor inventory control, resolving production issues, filling gaps in operational functions, and tasking design and engineering members with work outside their expertise, to avoid needed assistance from other - results in re-working, errors, and inefficient use of time across all areas.

When NPD is embraced by the entire organization, with work coordinated concurrently, information shared openly, and participation encouraged, the peripheral costs and inefficiencies are reduced.

A far more robust process of NPD must then include the following:

- Full management team participation and approval/agreement on product planning commitments within the strategic plan.
- Upper management agreement and enforcement of cooperation of departmental functions in support of one another and the NPD process.
- Inclusion of demand and credit for work accomplished in support of NPD for all supporting members.
- NPD leadership that is supported by department leaders not in direct chain of command.
- Cooperation of NPD leadership with all functional areas to ensure positive relationship.
- Clarity of process, progress, and work requirements to be satisfied, with advance notice to ensure departments have time to integrate work in their own process planning.
- Accountability across all divisions of the organization to complete work required to see NPD processes completed as needed, within agreed upon timing and schedules.
- Departmental leadership to encourage staff to participate and see NPD as a positive and interesting activity, over being a burden on limited time.
- Open and clear communications that provides full visibility of NPD activities, with credit given for all contributions made, from all participating members.
- NPD team enthusiasm and sensitivity to the need to be perceived as positive, cooperative, valuable members of all departments, willing to assist where needed to see mutual success is achieved.

When NPD is made part of daily commitments across organizational functions, the total time invested by everyone is reduced, results are realized sooner, and products will be released to begin producing a return on investment more quickly.

15 - Avoiding Avoidance

The excuse that a proper product process is too time consuming or complex, is avoidance.

For growing companies with limited staffing, every day is filled with distractions, disruptions, and chaos. Much of this is caused by a lack of structure and process. This is fueled by the gravity of the "NOW", that leads to the perpetuation of a daily existence that will never end - unless a certain and committed effort is made to stop it. Product development is one area where process reduces effort, even if it appears contrary to that.

Organizations frequently out-grow their organizational intelligence and capacity. However, every successful business demands predictable flow of operational actions that efficiently apply resources. If an organization intends to grow, NPD is an unavoidable fundamental function. Unstructured NPD approaches lead to loss of opportunity and wasted resources. Avoiding process development is an attempt to ignore this reality.

Within the realm of product management, failure to discipline sales members to adhere to product configurations or offering unstructured accommodations to customers, leads to order entry disruptions, unforeseen and unpredictable demands on engineering, disruptions in operations, failures of communications resulting in lost effort, and reduced profitability. Failure to control the NPD process leads to reduced market success, inefficient utilization of engineering and related resources, and disruptions to operations.

Avoidance behavior results in a waste of resources (capital and human). It is not possible to maintain a chaotic, uncontrolled, micro-managed, disengaged organization indefinitely. At some point, it will stall, or fail at the hand of a competitor exploiting the lack of discipline. As it is with any issue, the longer it is allowed to exist, the deeper the problems of recovery become. Some organizations find themselves so far down the dysfunctional path, that the effort of putting a proper process together and implementing it, seems virtually impossible.

Avoiding the work of building a predictable, robust processes for NPD and product line maintenance to continue casual seat of the pants processes generally leads to issues being discovered on the production floor, in the field, through inventory growth, idle equipment, or in stale products. Fixing a dysfunctional product process through reactive measures is not only inefficient and costly, but it also adds to the chaos, which prolongs the effort it takes to put in place a more appropriate process.

The most effective approach to avoiding risk, is to start with a formal approach of creating the cleanest and simplest process, setting out a roadmap, include clarity through definition, operate with open communications, and assign responsibilities throughout the organization. There is no better time to start than now.

16 - Cultures are Grown, not Constructed

Cultures are not forced or made up, they grow over time from a composite of the acts and attitudes of management; environment; employee behaviors; history; imagery; and perception.

A great deal is made of organizational "cultures" with hundreds of books written to demonstrate what constitutes great cultures. What is excluded from these books is the reality that culture is not made from posters, logos, slogans, values statements, retreats, or team cheerleading meetings.

The core culture of organizations is seeded into them by upper management and how it behaves. If NPD is approached as a separate activity that is then handed down to the remainder of the company, the cultural attitude will reflect that. If management jumps from priority to priority, responding to market and sales whims using shortcut approaches, the culture will see NPD as a disjointed whim pursued at management discretion, and only as much a priority as is commanded on the fly. If NPD causes conflict between departments or middle managers, a culture of avoidance and passive resistance will emerge. Micro-managers, who hold information back, create a servile culture that is always in need of direction, unable to move on its own. If management lacks trust, the culture will reflect that in staff members avoiding personal investment.

If management imparts a sense of organizational purpose and participation in an organized, method-based process that includes cooperation and coordination, participation, and inclusion of most levels of the organization, the culture will reflect that. When production floor staff is given a voice, and included, they will reciprocate with interest and enthusiasm. When middle level managers are encouraged to embrace NPD as part of their responsibility, the culture will reflect this attitude.

Culture begins with the highest-level leaders or owners of the organization. Not through speeches, emails, memos, or commandments, but through direct, visible, consistent action. It has been said that nothing destroys the morale of good team members faster than watching the bad behavior of others go without correction. When management continually places other priorities above seeing NPD processes completed, there is no path to NPD success, as the culture will be tuned to ignore it.

Since NPD requires whole-company participation and enthusiasm, it relies heavily on a healthy organization with a strong positive culture, made up of staff members willing to play a role in seeing the product process succeed and flourish - under the trust of senior management.

A culture that considers NPD as a serious priority, will find ways to satisfy the needs of the NPD process, will attend briefings, welcome training sessions, and enthusiastically embrace new offerings as a path to an even better future. Since cultures grow over time from the aggregate of activities and behaviors, it can take some time to see the culture of the company improve. Only after the NPD process and support of senior management is demonstrated through consistent, predictable, and reliable behavior, will the organizational culture begin to move, then embrace and amplify the gains made. For a time, this is a fragile existence, where reverting to past bad behaviors can undo progress made all too easily. This means that senior management must commit to the approach and stand behind it as it matures.

17 - Differentiating Sales Functions from Sales Departments

Sales is both a function and a departmental entity - too often conflated as one.

The goal of every organization is to convert effort into income through the sale of a product or service. Everything a company does is in some way related to capturing sales from customer prospects and building relationships that lead to more sales. This is sales as an organizational function. However, sales as a function is too frequently conflated to mean Sales as a Department being placed above the rest of the organization. In NPD, this often means that sales are allowed precedence over objective strategy, which leads to less than desirable results.

Sales as a function is the chain of events that connect the company's products with customers, in the form of orders paid for. Sales departments are a collection of individuals that act as a front line connection between customers or customer prospects, and the product offering. Sales also serves to process requests and orders in such a way as to support the company's efficient converting of work into profit, protect the company's profit and market position, and to represent the company as it is strategically focused to be. Sales departments also serve a role of Voice of Customer, by bringing customer input to the company.

Products developed by the NPD entities serve both sales as a function and sales as a department, through a combination of product development, product line management, price, and competitive strategy, as well as support of strategic marketing.

New product development is a long-term strategic process to meet future customer demands and create opportunities along a controlled path to a sustainable future. Without viable product to meet future customer needs and wants, there is no sales function or departmental need. Through careful coordination between sales functions and departmental activities, chaos is diminished and efficiency is gained.

When the organization establishes a policy of keeping sales focused on sales and NPD focused on NPD, as separate entities, the result is a purposeful cultural split along departmental lines, that will erode efficiency and success of New Products deployed and create a condition of hostility between the two.

NPD processes must include Sales as a department in the planning of products, defining of products, eventual launch and support of products generated withing the roadmap - communicated in a way that captures the nuance of sales functionality within the product designs and engineering themselves. Sales needs to set aside its primary goal of capturing immediate results, to offer objective, qualified and long-term input into the NPD process.

Ultimately, NPD is a proactive sales function that is best served when Sales as a department is engaged in the process of converting identified market need, to product that customers find desirable, within the reach of the organization.

18 - Avoid the Subjective

Product Development is not about who can create the most novel, unique, one-off product to dominate a market segment - it is about satisfying customer demand.

Too many products are introduced with little or no intended target, accompanied by a plethora of imagined options to create an illusion of completeness, hoping to find a customer to serve. This fails to realize that customers do not buy neat ideas or novelty; they seek products of value to suit identified real need.

Product Development is the process in which organizations identify value opportunities in the marketplace that, through proper and diligent effort, are converted to profit. It is entirely possible to deploy a new product that hits the target market well, only to destroy that opportunity with over-optioned, unfocused, hyped speculative flourishes that create confusion, muddied messaging, and a perception contrary to the needs of the customer. Focus is a two-way activity that involves defining organization focus from objective decision making - to outward focus on messaging and presenting the product back to the targeted customers. In this, clarity and simplicity are rewarded over complex or disorganized approaches.

Subjective novelty is he subjective work of artists, developed on the premise of "this really looks neat, and nobody else has anything like it, so it has to sell big." This is like the "engineering ideas looking for problem to solve" issue in tech industries. Neither of these lead to true success. Very few products are selected for subjective reasons.

NPD is an objective process, that includes customer needs and latent demand as top priority. Within that, factors of competitive conditions, value delivery, market perception, and fit within the organization and its market space - are all considered and evaluated.

While there are certainly subjective considerations to any product design and its engineering, the core critical features, benefits and fit to customer requirements take precedent. This is where product Roadmapping and defined clarity play a role. They add referential, objective, and subjective shape to any product being considered. The subjective considerations include areas of considerations defined and addressed in context with objective definitions of the product.

Reactive NPD is the work of satisfying a sales opportunity that cannot be resisted, that does not fit any planning. This, along with the whim or "shiny bobble" that captures the imagination outside strategic and objective bounds. These items may be considered, after being put in context of all other strategic and planned projects in process. Companies rarely find themselves short of ideas and perceived "opportunities.". Successful companies develop processes in which ideas are vetted, qualified, quantified, and decided upon. It all sounds uninspired and painstaking, but the costs of failing to take this approach are actually greater and rewards smaller.

19 - Defy the Gravity of the Bird in the Hand

The gravity of a sales generated suggestion, demand, or request - the bird in the hand - is extraordinarily strong.

Since the sales organization is "on the front lines", the idea is that they see what the market needs, imparting a sense of urgency to respond. Unfortunately, without proper guidance and training, Sales rarely sees far into the future, is blind to the influencing activities in a market that are likely to change customer behavior, and rarely include the dynamic realty that, even if the product idea is set in action immediately, it will not be ready for market for between 3 months to 2 years before it is delivered.

What frequently happens to sales-reactive organizations is an extension of the artist problem, coupled to the shortcutting approach. When sales make a demand known, this singular input is then converted to an urgent product release requirement, even if it costs stalling another in process - supported by a fictionalized product information sent to customers without full development being complete.

This is not only a distraction to ongoing NPD processes, should an order be placed for the "hot" product, resources will once again be drawn off NPD to finish the requisite processes in support of production. This is a recipe for disaster, as NPD development is constantly disrupted, and distracted - moving further and further away from a strategic process with each rushed introduction. Over time, as it is just another version of the shortcut process and will produce the same result.

To some, it might seem that holding off on product development until orders are placed forces work to be done in a shorter window of time, while avoiding investment in product that might not sell. However, what is missed, is that rushed product development does not provide the time to properly engineer, configure and source the products in a way that is compatible with other products in the Roadmap, or to optimize the product for profitable production.

As a warning to those attempting the transition from reactive to process driven - Their will be a struggle with committed hungry entrepreneurs, looking to get every sale they can.

One potential solution for this is to put in create a separate entity focused only on meeting the demand for bird-in-hand products. However, this will create the same conflicts with operations, inventory control, and NPD development as the shortcut approach.

The only real solution to this issue is to have in place an NPD process that is deploying a steady stream of exciting, market ready, customer focused and accepted products, that absorb so much attention from Sales, that the need to fill in with short term projects is diminished or eliminated. This does not reduce the importance of a NPD process, it amplifies it.

20 - Market Impact on Product Planning

Dynamic markets will have an impact on new product considerations.

Without new products, there is no progress, no forward motion, and little or no defense against the intruding hordes of market predators anxious to capitalize on market failures of others. New products are also a necessity to replace the sales erosion of aging products that are either falling out of style or out of date technology. However, there are other factors that must be considered in developing product strategy and Roadmaps:

Technology: One only must look at the past 20 years to see the impact of new technologies. Virtually everything we use today has technology integrated into it, that did not exist before. NPD planning must look forward far enough to avoid having hard work obsoleted before it matures.

Imports: There has been a shift in the tectonic plates of most product providers. The invasion of imported Asian goods has created price pressures and eliminated market positioning so fast, that those failing to see it coming, are suffering for it. Recent repatriation sentiment may have a reverse impact to consider.

Price erosion: Prices are now under constant attack from both low-cost imports and competitors willing to work on slimmer margins. Customers like it. From an NPD standpoint, it emphasizes the need to apply very tight controls over costs of development and production.

Marketing evolution: Anyone can put up a web site filled with product. Standing out in this deluge of new entries is a challenge.

Decision Maker shifts: Products are purchased through a myriad of channels, from B to B to on-line. Decision making has shifted as well, with traditional relationships collapsing and new ones emerging.

Social Media Overload: There are no singular experts now, just thousands of opinions, that are influencing buyer decision making.

Me-too pressures: For every great idea, there is a demand from sales members to copy, to capture their portion of an emerging pie.

Movements to Green, Efficient, Sustainable: Products that are not necessarily serving the specific objectives of emerging concerns, will be judged by them regardless.

Design evolution: What was cool yesterday may not be tomorrow, and the time to obsolete is shorter than ever.

These are just a sampling of the shifting sands that NPD must consider. Addressing these requires a constant process of information collection and evaluation - to avoid wasting development time on comfortable ideas that may not have any viability once they are made available. Considering new products often take time to mature, this is a significant challenge.

21 - Know What You Have Done and What You are Doing

Knowing how you got where you are, and where you want to be next is critical.

Many companies are what they are without following any path or plan. They aggressively pursued opportunities mined from a base of prospects. These entities often collect a wide range of products aimed in different directions as the opportunities led them. Others grow their core around offering a limited well-focused product they are passionate about. Still others emerge from satisfying a single need, that leads to growth from customer demands.

The first step in defining a robust NPD process, is to fully understand the origins of the organization, and how it came to be what it is. Additionally, a full line evaluation, in context with this summation should be done, with an objective assessment of what is succeeding and what is not. This becomes the first portion of the Product Roadmap.

With a description of the company's past and current situation, the next phase is to differentiate between what has been done and what is going to be done. This includes culling products that are not producing reasonable revenue or income, as well as products that do not fit the desired image of the company going forward. Further, culling should reconsider all products that are generating customer service issues and returns that erode profitability.

While there is a simplistic 80/20 rule asserting that 80% of sales revenue will come from 20% of products, this is rarely the case. Rather than start with pre-conceived notions, dig into the actual sales and profit numbers and define the product line with actual objective data. The goal is not to remove a specific % of products. The goal is to prioritize by revenue generated, profit, effort, marketing value, and image. With this in hand, the organization will know what it has been doing, with clarity.

With the existing product line defined, organizations should then summarize what their customers believe they are, for what products they are known for, with pricing perceptions, and general position within the competitive market. More than a few are surprised at the results - if they pursue the exercise with objective discipline. The temptation to discount contrary results, or twist input to fit internal expectations is great, and difficult to avoid.

With the background information in hand, and understood, the work of forward-looking discussions and strategic planning can take place. This will lead to the need for a product roadmap that outlines what is to be done with existing products, and what new products are needed to reach new goals.

From this foundation, looking ahead into where the company intends to go, the work of NPD can be defined and added to the roadmap. The culmination of these activities creates a fresh vision and continuity from past to future that is clear to all involved.

22 - Input Sources

Where a company gets its information is as important as what it does with it.

Collecting ideas for potential products is easy. Most organizations have more ideas than resources to pursue them. However, for every fifty ideas collected, there are only a handful that are viable. Finding that handful requires input from a wide array of sources, or the risk of falling into a subjective folly trap is great. Ideally, getting input direct from "customers" would be the preferred direction. However, there are catches:

The first catch is that direct customer input does not work with small sample sizes, as the diversity of opinion and perception responses are too divers, demanding a large sample size. Even then, customers are too often disinterested in participating on a broader scale, and resist providing feedback.

The second catch is identifying what a "customer" is. Organizations that utilize contract, retail outlets, or commissioned sales channels, often conflate these entities with being "the customer". This is similar the NPD shortcut issue, as it is an easy solution. Unfortunately, those members are motivated by self-interests not necessarily aligned with the organization. They also do not suffer if any company fails, as they can always find another to replace it - so their vested interest and risk exposure is small. Information streams need to be deeper than this. These entities should be included for input, but are not ultimately the paying customer.

The development of solid input into the NPD process requires deploying a diverse process that collects data and responses from many perspectives and channels:

- Sales channel partners as advocates for a sub-set of customers.
- Sales department members. This requires strong sales management to assist in both training sales members in what input is valid and what is not.
- Buying and purchasing customer surrogates. This includes a selection of purchasing agents, buyers, heavy user customers, or any other customer group that pays for the product at the end-use level.
- Influencers and influencer surrogates. This includes those who work in making product selection decisions on behalf of customers, such as architects, interior designers, and design consultants.
- Macro influencers. These are policy makers, members of professional organizations that are known to be thought leaders, and regulatory agency members.
- Marketing research, competitive evaluation/profiling, customer perception surveys, etc.
- Quality, Return, and Field failure report data.
- Operations, staff suggestions, and other internal input collections.

Information can be collected through survey, direct interview, and direct contact with NPD members, Sales, and Management members. The only caveat is that all gathered information is shared openly with all involved. Note that opinions of Managers, Sales team, and NPD leadership, is not included in the information sources. These members collect, evaluate, qualify, and interpret information - they should not be the sole source of consideration used in decision making or customer insight.

23 - Selecting, Culling and Qualifying Ideas

Selecting products for development from the collection of ideas and information is a hurdle that requires discipline.

The process of evaluating product ideas and input to build the product roadmap is what differentiates the moderately successful from trend setting leaders. Interpreting market activity, input from sources, observations of the market's movements, and competitive activities demands careful objective thinking, with enough room for imagination to find the best possible path forward.

The following is a basic starting list of considerations to get the process going:

1. Differentiate products that add the most value to the target customer, for identifiable reasons.
2. Look at products that target weaknesses of competitor products that customers have made note of.
3. Prioritize products that deliver the market products simpler products that replace complex items that over-serve customers with features they never use.
4. Prioritize products that will meet an emerging demand, that is under served.
5. Choose viable products that fit the company's current market position, but do not overlap existing items on offer.
6. Select products that advance the company's image and market position - with products that have high sales potential (avoid image products with low potential, they will not deliver a real ROI.)
7. Consider new ideas that are not yet available very carefully. Often first to market is not an advantage, but a liability. First in the mind of the customer is far more important, which might wait.
8. Evaluate all ideas considered for sales volume potential over at least 3 years. Prioritize those with the greatest and cull the bottom of this list, regardless of any other attribute noted above.
9. Keep in mind that building significant sales growth on the back of small volume pursuits requires more effort than seeking larger volume opportunities, even if they take longer to deploy.

For each of the products that make the short list, collect and define:

1. Critical design features, mechanical details, optical and electrical properties, test metric performances, required to serve the targeted customer and market.
2. Price target
3. Volume estimate and projection by year, and source of data.
4. Critical marketing dates and release schedule
5. Development budget
6. Product release timing considerations.

This just scratches the surface of product selection. Every organization will find its own path to this end. However, it cannot be stressed more, that seat of the pants and intuition are rarely as right as many believe. For the most part, subjective decision making will result in poor results. To realize significant growth may a;sp mean stepping into new and uncomfortable territory, which is best done with solid process

24 - Development Structure

Process with no structure is just soup. You cannot build on a bed of soup.

Once it is decided that the organization is ready to dive into developing a proper NPD process, the first step is not to brainstorm a pile of ideas on what is going to be done, what gates are going to be passed, and what approvals are needed. Those issues cannot be addressed until it is clear what structure within the organization the process is going to build on.

Since the entire organization is involved in NPD, the first step is to evaluate who needs to be involved to create an inclusive process. For example:

- Design and Engineering are obviously going to be heavily involved. Is this going to be a department wide endeavor (best approach) or will only select members be assigned NPD tasks and project work (not ideal)?
- Operations is going to be involved in numerous stages, including parts making for tests and prototypes, to pilot runs, manufacturing engineering tasks, cost evaluation, inventory control, production integration, capabilities fit evaluation, fab and assembly operations assessment, material handling, process flow, etc.
- Sales is going to need to be involved with Voice of Customer input, participating in various product definition exercises, assistance in customer reviews, competitive analysis, pricing, sales tools, and presentation needs, etc.
- Marketing must be involved in Voice of Customer, research, and promotional roles.
- Finance will need to be involved to coordinate and support budgeting and ROI analysis.
- Owners, stakeholders, and senior managers will be involved in approvals, strategic plan development, Roadmap execution, and general higher-level considerations.

These are just the skeleton of the structural members involved. The next step is to identify what each will contribute, and how they play a role in the flow of the process. Essentially, the following needs to be asked of each one:

- What is needed from the NPD process to satisfy each areas' needs for information to properly process work, or produce product efficiently?
- What approvals and project stage gates are necessary to ensure your area can ensure the products are fully developed, or decisions are made in line with expectations?
- Who specifically (by title, not individual) will be assigned as the areas' gate keeper and participant in the process?
- How will the department involved assign responsibility to complete the work on time, to ensure the development flow is not disrupted at the department level?
- What is the exact flow of the process within each functional area - mapped.

25 - A Task without a Process is Just Aimless Work

The process of creating a formal process is about developing a path that converts a series of task assignments into completed process steps.

The process of New Product Development is more than seeing an opportunity and throwing products at it. Once the base structure is established, the next step is to create a proper process of NPD that describes, maps, and specifically outlines what is to be done at every step, through each area, and with what approval stages and qualifications. New product process is a formalized chain of events that starts with opportunity capture, leads to value capture (sales), and ends with managing product lines for optimizing profit. There are hundreds of potential facets to this. However, in the interest of keeping things simple, the best processes are those that include the most necessary formal components:

Strategy development: The core who, what, and why of the organization's intended trajectory.

Opportunity Identification and Qualification: As noted elsewhere, separating the great opportunities from the myriad of ideas that flow into a company is critical. This includes product management of existing offerings, from improvement through obsolescence, as much as it does new ideas.

Defined Clarity: Elevating the best opportunities to a clearly defined target to be met.

Roadmap development: The path from the past into the future.

Development program: The path from concept to realization a product must pass through, including design and engineering timing, milestones, approval gateways, budgeting, prototyping, proofing, or piloting, production instructions, organizational training, validation, testing, and other tasks that must be completed before a product is released to market.

Deployment program: How is the product to be released or launched, and timing required.

Operational roll out: Defined requirements for integrating products into the ongoing operation.

Follow up: Data collection on product sales performance, market perception, quality returns, application issues, successes, and failures, including gathering application examples and studies.

Closure: When a product has been selected for discontinuance, including inventory impact, sales communication, and steps necessary to remove the product from the operational stream of the organization.

These are suggestions to begin the effort of creating a process. The ideal approach is to start with a map of every step a product must go through to be fully realized and marketed. This should capture co-dependencies that create sequential steps, and parallel paths - where numerous activities can take place simultaneously. For every process step, the entities within the organization necessary to its completion should be identified and agreed upon. This may take some time, and eventually will need to be approved by senior management to integrate all activities into the numerous departments involved.

26 - Avoid People Centric Processes

While it is tempting to hire a big gun to develop a process and drive it, this is not the best approach.

Big guns and hot shots are great, only for as long as they stay around. If the process is built around an individual, and they leave, it will likely go out the door with them. A more robust approach is to put in place an NPD leader who understands that the process and its structure is not theirs exclusively. Their goal is not to author the process at their desks, but to lead, coach, train, and guide the entire organization through the effort of creating the company's process.

Process that is objective and built on a disciplined organization of defined steps, checks, approval points, progress tracking, reporting, sharing of information, communications channels, and adherence to agree upon protocols, are the most durable. When the process comes from the collective of organizational leaders, managers, middle level managers, and task level staff expected to adhere to the result, it becomes a live, organizational entity. This removes dependance on an individual, producing resilience to personnel changes.

When an individual leaves, or needs to be replaced, the process defines their role, and what their replacement will need to be qualified to execute. This defines staffing qualifications, as well as performance metrics for individuals. This is why the need for the process as a team and organizational entity is so critical, as it eliminates the subjective, opinion-based approach as individuals holding relevant positions change.

An example of a documented approach to process management can be found in ISO qualifications and procedures. The focus is on defining procedures, protocols, and processes clearly, training individuals to work within those bounds and encourages them to participate not only in consistent process execution, but in the constant effort to improve it through member involvement.

There will be some that object this approach, concerned that it limits their flexibility to do their job. Ultimately, there may not be a role for them, as the discipline to remain withing the bounds of a defined process must be natural and voluntary. Those who understand this, know that having a formal process, with established steps and procedures, is liberating - as it eliminates uncertainty and subjective distractions that happen when there is no formal approach. When task steps and requirements are known, planning and scheduling can take place. When departments are assigned responsibility to perform, time estimates, and impact studies can be completed. When the process is defined and formalized, it can be improved. When process steps are defined, everyone knows what is done, and what isn't.

Once a process is defined and agreed upon, it should be written out clearly and shared with all participants, then referred to as projects progress. This reinforces the approach, especially if it is visibly enforced by senior management.

27 - Process Ownership and Assigned Responsibility

Nothing brings an organization together more completely than shared ownership and defined responsibilities.

The most effective method for maintaining a formal process is through sharing of ownership across all functional areas involved in the NPD process. This includes assignment of related responsibilities that are included in individual and departmental metrics and evaluations. This is what separates the closely held, micro-managed organizations that can never seem to execute well, from those that have a regular beat of new introductions, innovations, and market setting discoveries. Single source approaches push individuals down and away from involvement with the effort. Inclusive ownership and with assigned accountability pulls individuals in and rewards them for their contribution.

Ownership also means some level of trust that those assigned will put the needs of the entire process over personal interests or work avoidance. For this reason, when developing a mix of individuals to bring into the NPD process, goals assigned should be framed on the grounds of contribution to the whole, over isolated individual goals definitions.

To create a fast moving, flowing NPD process demands participation from many levels and sections of an organization. To this end, there will need to be assignments of NPD process component responsibilities outside the core NPD team, outside the direct supervisory chain of the NPD leader. This demands coordination between managers and supervisors, and acceptance of the need to share resources to complete the tasks involved within set scheduling. For example, there will be a need for some member of operations to be assigned NPD process ownership, in order that effort be invested in providing prototypes, first articles, or assistance in developing manufacturing work instructions be accomplished in a timely manner. For each of the areas described in the "Development Structure", there will need to be someone, identified by position held, not individual by name, who owns that area's NPD responsibilities.

While there is often push-back against adding work to department members outside the core departmental requirements, the reality is, that if NPD is not completed efficiently, the cost and impact in down-stream issues and problems will absorb even more time. The problem in management is recognizing that the work necessary to see NPD executed, badly or well, leads to absorbed time from the same areas that are being asked to assist in the NPD development work. Investing in up-front processes, using simplified, clearly defined effort, is always a better option than dealing with distractions and chaos later.

In support of the combination of direct and associated NPD process owners, exposing their work to the entire organization is essential - with credit given when due. The NPD leader should act in the directive, support, coaching, and advisory role - guiding the process owners through their various tasks, coordination of activities and ensuring that the road is clear in front of them, to set them up for success. This should be followed up with progress report collection for public and management information, that daylights the accomplishment of members involved.

28 - The Two Faces of Marketing

Marketing has two objective faces - one expresses, the other listens.

Marketing is generally considered for its role in communicating to the target market, presenting company imagery and products for public consumption. Small company's often stop at this level and treat marketing more as an in-house graphics and advertising service bureau, with additional sales support task assignments. For this reason, the staff hired for "Marketing" is often limited to this definition. Yet, this is just one facet of the function of marketing.

The basic function of advertising, communications, and graphics could be considered its expressive face, where the organization is communicating to customer prospects. To elevate the organization and its NPD process, Marketing should be redressed to add a listening face. This is the function of serving the company with information captured and derived from the market for decision making.

The listening face is a critical advancement in how a company builds its future. In this, marketing serves as an additional Voice of Customer. Unlike sales, who will utilize its customer contacts, channel partners, and experiences to create its image of customers, Marketing looks at customers through objective collection of data. Marketing should utilize available databases, surveys, competitive activities, news articles, industry media outlets, surrogates, and collection of company sales data to produce a picture of customer behaviors. Modern marketers have numerous ways to collect data, including purchased studies, web traffic, promotional message responses, and trade show interactions.

Marketing should be made an integral part of the NPD process. For every product a company is considering, marketing should be tasked with investigating and creating a summation of every possible "like" product in the market, with as much detail as possible. This includes looking at offerings of competitors, profiling of those companies, and evaluation of their apparent direction, including estimating their product roadmap. To this end, it should be the task of a Marketing to collect and maintain a database of organizations that are within the company's area of interest, and those on the periphery of it.

Before a product is committed to, a market evaluation, which includes both Marketing and Sales departments, needs to be completed and reviewed. This avoids jumping into an offering that is already in the market and failing due to customers not finding the idea valuable, launching a new product into unseen headwind of competition, and missed opportunities from failing to tune the product to meet the nuanced needs of customers in ways competition is delivering, or missing.

Objective market intelligence is potentially more important than marketing communications. The difference between leaders and losers in most product markets is often based on who has the most solid, complete, and actionable vision and connection with the market being served.

29 - Product Management and Post-release Feedback

Product line management and post release feedback are too often set aside in the rush to move to the next project on the list.

Product line management is an integral part of product roadmaps, and NPD. Post-release feedback is a critical and important step in the development process. Both are similar in function, but for different reasons.

New products must be deployed as part of the larger landscape of an organization's offering to the market. The roadmap places all past products in a progression with current NPD effort, extending to future projects being planned or considered. This acts as both an organizing reference, and as a method for visualizing opportunities to fill gaps in offerings that customers are asking for or need.

The Roadmap identifies where older products to be obsoleted fit in the larger picture, and what impact that may have on product continuity. Product management considers viability and consistency, in the context of both company profitability and customer satisfaction. There is little value in having an offering filled with slow moving items, as it clutters visibility of more current, higher demand, more attractive new offerings.

Post-release feedback is the work of nurturing a new product as it is absorbed into the market. Often, the early response to a product indicates its true viability. If a product is faltering, there is no better time to take corrective action than at the earliest stages of marketing. Addressing early quality failures, or product performance deficits are critical to be resolved quickly. Changes in marketing approach, specification adjustments, features inclusions, or changes in imagery may be necessary to keep a product on track. The earlier issues are discovered, the more likely the changes will have a positive impact. Skipping this process step will cause some products to fail that would otherwise succeed, had they been addressed with diligence.

Post-release and obsoleting processes are closely related in providing the NPD team information as to what is well accepted, what is no longer interesting, and where changes in ongoing projects may be needed to head off any miss-direction from assumptions made on old information.

As it is with all other aspects of the process, making the data collected and conclusions drawn visible to the entire NPD team is important to building a culture of inclusion and ownership. While there are certainly product development efforts that limit this to some degree to protect secrets, most product manufacturers do not need such tight control.

30 - Failed Products can be a Good Thing

There are lessons in failure that success cannot teach.

Even the most well developed, smooth running NPD process is going to produce a market failure. The test of a robust process is in what happens when this occurs. Simply putting it aside and causally dismissing the effort is a simple, shortcut approach that takes no effort. However, this misses an opportunity to learn valuable lessons.

How did the product fail?

For those that failed to technically perform as expected, or experienced quality issues - knowing why, and how that occurred within the process established, is a critical lesson to learn. Whether it was from a faulty purchased component that was not verified, or a design and engineering oversight - digging into why a product failed will provide insight for future reference. The entire team should be involved in this evaluation, and the corrections to be made, either to salvage the product, recover from customer complaints, or pull the product to improve and re-release it.

Products that fail to meet sales targets need to be evaluated with equal diligence. Was the sales forecast realistic? Is the early sales response indicative of expected future sales, or just a slow start? Was something missing in the product definition, was there a feature that customers found detrimental, or missed market comparison, creating a lack of interest? What information was used to indicate the product would succeed, that is now suspect, and what steps are to be taken to recover from that? Are there other products in the Roadmap that are likely to suffer a similar fate? Should they be revised or reconsidered?

Every NPD failure provides insight into the market and the company's ability to satisfy customers. Learning from failures provides information that is difficult to gather in normal product opportunity processes.

Not every product is going to succeed. There will be instances where every step and process executed is well done and meeting every specification – that produces disappointing results. However, the assumption that a certain percentage of all products developed will fail, is wrong. With a proper approach, most of the products deployed should result in a significant portion of the intended success, or there is something wrong with the process itself. There should never be an instance where failure is just dismissed as a statistical inevitability. Every failure needs to be scrutinized to verify that the process behind them was not the reason they failed. Organizations cannot resolve failures in customer response. They can resolve issues of failing to accurately characterize the customer's needs, failures in proper definition development, missed market timing, and failure of considerations that led to lack of customer interest. Every lesson learned will increase the potential of each successive new introduction to succeed.

31 - Alternatives to In-House Development

With proper process, product development does not need to be an in-house operation.

While many organizations keep their NPD processes in-house, others find it more effective to seek outsourced assistance. This can range from simple ideation help to execution of the entire process, from concept to realization. This can include domestic or foreign relationships, vertical manufacturing integration, outsourced components or complete products. Regardless, many of the essentials of NPD process remain.

The need for a clear product definition remains, as this becomes the guide to outsourced members to work from. The costs of poor direction and the resulting necessity for corrections needed, is significantly higher when poor direction is provided.   Reworking to correct poor direction is going to increase the cost of any work contracted. Not having a clear intent or next step for delivered contract work, wastes everyone's time.

There also remains the internal processes that will require similar ownership as in-house - to coordinate and ensure that the finished product is consistent with company operational needs. The need for process also remains, as it must address how information and development flow is to be pursued with the external entity. Outsourcing some portion of NPD does not lessen the need for process formality or defined clarity, it amplifies and elevates it, in order to utilize outsourced resources efficiently. Anything short of this will result in delays, additional costs, and failed development projects.

One area where outsourcing can play a role, is in the development of the NPD process and its protocols. Consultants can act as facilitators and organizers of the work of defining the elements of the organization's NPD program, the processes, protocols, personnel needs, staff assessments, evaluation of organizational strengths and weaknesses, and meeting management. There are several sources for such facilitators, including industry experts, senior management consultants, the SBA, and mentor programs. This may be an alternative path for those who currently lack an NPD leader with the capacity to build the process from scratch, or in organizations that are in the nascent stages of taking this work on. However, the intended goal should remain on the organization building a process of its own, that it can maintain. Consultants may serve to assist - but should not be relied upon for execution and management.

Outsourcing may also be limited to specialties, technical experts in various disciplines, customer advisors, marketing experts, tooling experts, material specialties, and process experts that are brought in as the need arises. This approach and the definition of when it is to be used, should be included in any process description, to define why, how and when they are be included.

32 - Dealing with Inevitable Distracting Disruptions

Distractions and disruptions are the enemies within that kill progress.

Staying on-plan is a challenge for every organization. If not anticipated and controlled, through organizational processes to mitigate wasted time and unnecessary redirection of effort, the result can accumulate and become disastrous to the deployment of new products.

To those imposing on the time of NPD team members, requests and demands seem innocuous and small, as they do not see what others are imposing simultaneously. For this reason, there must be full exposure and a formal process of tracking, communicating, and exposing the demands being made on the NPD members, for all involved to see.

There are applications, such as MS Teams and Airtable, that provide request forms that are easy to fill out, that automatically populate a log of requests, prioritization, tracking of progress, and provide summaries of requests and the time taken to complete them. There will always be resistance to formal processes by individuals who see their request as small, not realizing that many others are also making requests that they too consider insignificant. Summaries and formal request processes daylight the volume, content, and consequence of all requests on a single plane. Further, these applications should show what is being done, who is assigned, and when it will be done.

Tracking incoming requests for assistance is a critical management tool as well. This provides managers insight into the types of requests coming in, by who, and how appropriate they are. Using this information, there may be ways to reduce demand for certain requests by adjusting policies, protocols, processes, increasing access to information, or including some feature in the output of the NPD team that eliminates the need for their involvement down-stream. Tracking applications also reveal when staff levels are too low to meet incoming demands without disrupting NPD processes. This is critical for senior management discussions and budgeting.

The same approach applies to time tracking of individuals involved. Another necessity is the use of timecards, or time tracking applications for everyone involved in NPD processes. Understanding the time invested in every NPD project is critical to project tracking and future project planning, as well as employee performance evaluation. The correlation of project assignments within a NPD project, and work assignments from the request log presents to the NPD leader and management a clear picture of the actual demands made and the time invested in meeting those demands, as well as how well each member is doing with time management in general. These are essential to keeping projects on track, assessing staff capabilities and anticipating staffing needs.

Failing to control, track, and continually evaluate time invested in NPD, distractions, and disruptions, leads to blindness as to why projects are not completed on time.

33 - Dealing with Process Failures

Processes are living entities that demand nurturing, feeding, and adjustment to overcome failures.

When any process of NPD is established and put into action, there will eventually be instances where process will fail, or the demands made on the NPD team cause issues that disrupt progress or a project to unravel. These are generally not indications of a failure of the entire process, but some component within it that is not meeting the needs of the projects being managed. These failures are not justification to abandon the process. Failures identified are beneficial, as they expose a deficiency that needs to be resolved. The sooner the issue is discovered and resolved, the lower the impact on projects in process.

Process failures generally come in these basic forms.

1. Poor communication is the most common failure mode for any formal process. The importance of communicating clearly what is required at every process stage, to all concerned and responsible, will inevitably lead to someone dropping the ball at a critical juncture that causes down-stream process steps to fail. Resolving and clarifying communications is an ongoing effort than cannot be over-stressed.
2. Failure of individuals to execute assigned responsibilities from lack of personal investment, management direction that disrupts their ability to perform, or lack of understanding. The resolution may involve changes in management directives, additional training, coaching, or a change in personnel assigned to complete the work required.
3. Lack of process clarity and/or assigned task definition that leads to confusion, misdirection, wasted effort, and out-of-synch execution that requires work be redone to align with down-stream or parallel project work. The attributes of clarity and simplicity are critical to avoid this. To avoid process failures in the future, revieing the methods used to coordinate and create work descriptions, and how they are communicated is necessary on an ongoing basis.
4. Lack of management support can have a serious effect on both process and project progress. When management fails to stand behind the process itself, through direct intervention, or dismissive acts or critique, the strength of the process in the minds of the organization is weakened, and eventually, the process will collapse as being superfluous. Management criticism and concerns over process issues must be kept between managers, and addressed "off the books", not aired publicly. This is one area where withholding communications is called for, until revisions are made that satisfy the manager's grievances.
5. Failure of NPD leadership to maintain adherence to the agreed upon process. The NPD leader must monitor every project, demand made, and staff activity within the bounds of the process, and provide direction, coaching, or advise to participants to maintain continuity. This is the core function of this position, that must be done with a high degree of diligence and discipline. Resolving this may require a change in leadership, or adjustments to the process to resolve deficiencies.

Wrap Up

This collection of thoughts and ideas is not intended to prescribe perfection in NPD pursuits.

The basics precept of this collection can be summarized as follows:

1. Keep every process as simple as practically possible, without omitting critical needs.
2. Seek clarity through formal development of project, product, and process definitions.
3. Avoid shortcuts.
4. Attain Speed to Market through clarity and simplicity, not hot rush shortcuts.
5. The Product Roadmap is essential to the process and organization.
6. Management must trust the NPD process and its leadership fully, or they will fail.
7. Selecting the right NPD Leader based on their approach style is essential.
8. Keep meetings short and organized to increase clarity and efficiency.
9. Turn away from email and toward team application technologies to build better communications.
10. Apply clear definition to Strategic Plans to clarify actions and expectations.
11. Define SMART goals in relevant terms.
12. Get past the fear of culling failed and obsoleted items.
13. Knock down organization petards to allow the NPD process to flow.
14. Approach NPD as a whole company effort, not a closed departmental function.
15. Avoiding organization process development delays progress.
16. Culture growth is critical to whole company embrace of NPD.
17. Sales as Function is whole company must be realized separate of Sales as a Department.
18. Avoid subjective in favor of objective decision making.
19. Be cognizant of the gravity of the bird-in-hand and its impact on decision making.
20. Be aware of market movements and how it impacts NPD.
21. Know what you have done to know what you are doing.
22. Input sources are critical in developing good decision making.
23. Not all ideas are good ideas, find a path to sort them and keep only the best.
24. NPD process depends on supporting organizational structure.
25. Tasks without process and definition are just inefficient busy-work.
26. Avoid basing NPD process on people to maintain continuity over time.
27. Assign ownership and responsibilities to amplify process impact.
28. Marketing has two functions, both necessary to NPD.
29. Line management and feedback as important as initiating input.
30. Product failures are good feedback for future effort.
31. Consider alternatives to in-house development when needed, with definition.
32. Track and formalize processes to deal with distractions and disruptions.
33. Processes require continual maintenance and adjustment to keep them alive.

33 Thoughts on New Product Development

For the smallest organizations, applying all 33 of these at once will overwhelm even the most enthusiastic. The best approach is to start at the top, developing the simplest of processes and formally defining work. From there, as NPD work is accomplished, add additional process descriptions as time allows. Over time, a natural order will emerge, as well as conflicts arise, that can be addressed and adjusted to eventually lead to a complete and formalized whole-organization process.

For exceptionally large organizations with deep benches of highly qualified members, these ideas may seem too simplistic and lacking in necessary detail to put into action. Yet, within these larger entities, the principles of these 33 thoughts remains relevant. In my experience, there are more than a few that have lost sight of this, who suffer from overly complex processes, poor communications, long mind-numbing meetings, and management issues that could, perhaps, benefit from a review and rethink.

It is impossible to put something like this together that applies to everyone. Further, in the effort to simplify each idea into as few words as possible, there are details, exceptions, and variables not included. This is intentional. First, nobody wants to read thousands of words on these topics. Second, as noted several times in this collection and the introduction, every organization must find its own path to building a process that is tailored to its product, customer base, sales channel, management capacity, and personnel. This is the most effective path to building a strong, supported, and efficient process and approach to NPD. The collection of thoughts here is to suggest various basic foundational concepts needing attention and inclusion in whatever process is deployed. Skipping many of these, or working around them to avoid the effort, will, in my opinion, result in a poor process that eventually fades from lack of effectiveness.

NPD is a critical investment of a company into its future. Treating it as a nuisance, or auxiliary activity, subordinated to the daily churn of sales and production will lead to an inevitable and unavoidable result - stagnation and lower income from operations. Sales can only push a slowly aging product offering so far. Customers are only loyal for as long as products are relevant to their current and ongoing needs. Engineering can only squeeze so many pennies of profit from old lines. Micro-managers who hold information and progress too tightly can only get so far with the limited staff capacities they create under them. HR can only do so much retaining talent in a stagnant organization. A robust and strong NPD effort is, without doubt or reservation, the lifeblood of growth in sales and organizational strength. To this end, NPD demands formal, well organized, well defined structure and process that is organizationally integrated and efficient.

There are no leading organization in any industry or product category, operating without a robust NPD process driven by leadership, supported by management and corporate stakeholders. This is not just theory or abstract concept, it is reality. Why so many small business entities resist it is a mystery - but explains why so many fail to reach their own lofty goals.

I hope this small book provides some direction and assistance to the reader in approaching their own NPD efforts. I look forward to seeing amazing results!