McCreight & Company

STRATEGY IMPLEMENTATION CONSULTANTS

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BREAKTHROUGH DEVELOPMENT (BD): A CONCEPT AND PROCESS

Too often, breakthrough development programs fail to capture the opportunity, or solve the problem, that would deliver customer value in a timely or financially feasible way. This must change if organizations, competing in today's global economy, are going to outpace innovations occurring in their fields.

What are the principles critical to breakthrough development success? How can organizations ensure they have the right people, processes, and tools to achieve breakthrough development?

We recently partnered with a large, global client to examine the principles and practices that are critical to success in managing breakthrough development programs. The client had been struggling to answer the following questions.

Why is it that:

- *too many of our breakthrough projects fail, in spite of the millions of dollars and valuable human assets invested?*

- *some of our breakthrough projects' goals are embellished and expanded until, like a ship with too much cargo, the initiatives are destroyed by the weight of unfulfillable requirements?*

- *too many breakthrough project leaders lose a sense of time and fail to deliver what we need, when we need it?*

- *some of our breakthrough teams struggle interminably, achieving under-whelming results, while others perform quickly, with stellar results?*

The client was interested in going beyond simply examining team dynamics and project processes. The scope of our engagement included interviews with senior executives and leaders and members of selected teams – both successful and not so successful. In addition, we interviewed and collaborated with a number of thought leaders in industry, government, and academia. Selected collaborators are listed on page 7.

The outcome is a model for managing breakthrough development initiatives. It is a customer- and talent-centered approach to success in achieving high-value development outcomes quickly – on-time, on-budget, and on-target.

The purpose of this *Insights* chapter is to share a brief summary of the principles and practices we developed to ensure breakthrough development success. A book with in-depth recommendations for launching and managing breakthrough development programs will be published in 2008.

Definition

For purposes of this guide, we define Breakthrough Development (BD) as projects, programs, or strategic initiatives that involve:

- a focus on creating value in new, difficult, or untested situations – for example: overcoming scientific, technology, or organization barriers;
- the need to deliver value-added prototypes, simulations, or deployable products or services in cycles involving less than 90 days;
- a small, competent, and collaborative team, with the responsibility and authority to understand fast-changing requirements, then to translate evolving requirements into a sound and cost-effective solution; and
- a priority on including users and other stakeholders in every stage of the breakthrough development process.
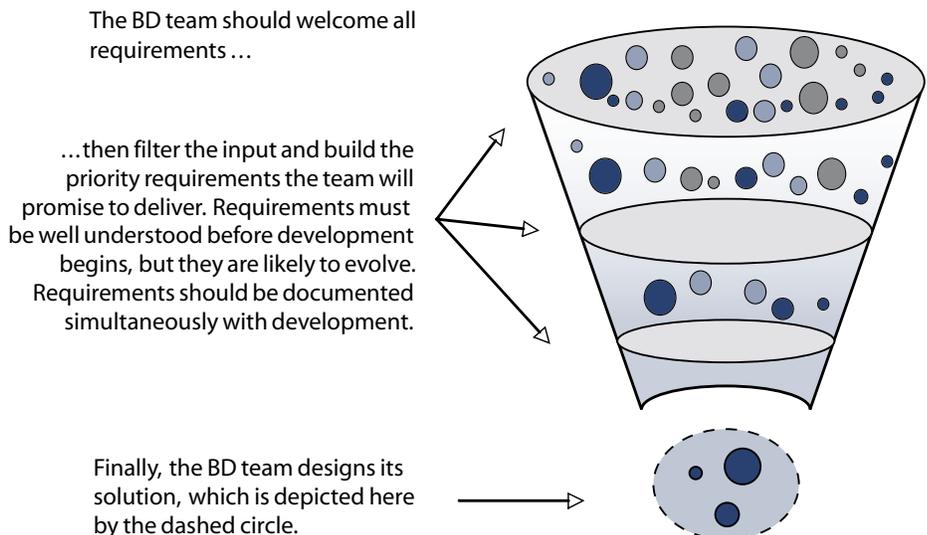
Principles Critical to BD Success

We believe there are over 200 actions and competencies associated with successful breakthrough development programs. We have grouped these into the following seven BD principles.

1. Trust No Requirement
Welcome all requirements, but challenge them. BD programs are charged with adding value, not trying to please a wide variety of stakeholders who may have conflicting or irrelevant objectives.

Frequently, users present symptoms as "the problem." Effective BD programs analyze symptoms, then define and solve the underlying problems, generating their own *real* requirements in the process. The BD Program Manager (BDPM) and team members own, and are held accountable for, solving the problem.

> *The BDPM and team members are responsible for getting their requirements right. BD programs do not "do as they are told."*

The BD team should welcome all requirements …

…then filter the input and build the priority requirements the team will promise to deliver. Requirements must be well understood before development begins, but they are likely to evolve. Requirements should be documented simultaneously with development.

Finally, the BD team designs its solution, which is depicted here by the dashed circle.

Legend ● Requirement – circle size demonstrates the scale of the requirement relative to other priorities.

Too often, either unnecessary requirements are added, or important changes are ignored. In each case, BD programs lose the opportunity to add meaningful value.

2. **Prove Your Value**
BD programs are continually challenged to prove that they are delivering a solution or system that will add real value. Know the objective, know why it exists, and know what can make it obsolete. Assess value in the context of changing requirements, leaders, organizations, and the "outside world." In addition, value should be assessed against higher priority initiatives that may be underfunded or understaffed.

The graphic below highlights one way a BD program can communicate its worth. The breakthrough effort should be defined relative to the enterprise's overall mission and goals.

Own requirements
BD leaders and team members should listen carefully to requirements discussions and then weigh the information against the team's development plans, conceived solution, and the value they expect to add.

BD teams must be tenacious in ensuring they understand what they need to deliver, within what budget, and when.

3. **Leverage Assets, Peers, and Lessons Learned**
Leverage existing assets, your peers and their resources, and lessons learned. Do not reinvent the wheel. Actively seek existing products, services, and systems that can enhance your solution.

Many breakthroughs succeed without inventing anything new, but simply by combining existing elements in a new way.

Enable others to leverage your solutions and your lessons learned by ensuring your development is transparent to your peers. Design and develop your solutions in such a way that they are backward compatible and forward looking, therefore allowing effective access to and from old and new resources, products, or systems.

4. **Test Early and Often**
Test your understanding of requirements, your designs, and your solutions as early and as often as you can to ensure your team is on the right path. A collaborative process is important for breakthrough development success. It is a process that routinely involves input from all stakeholders and takes into account emerging science, capacity, and options.

The ultimate solution is a work in process that will evolve through frequent feedback and insights from the array of stakeholders whose needs may be changing or who may define or perceive value in an evolving way.
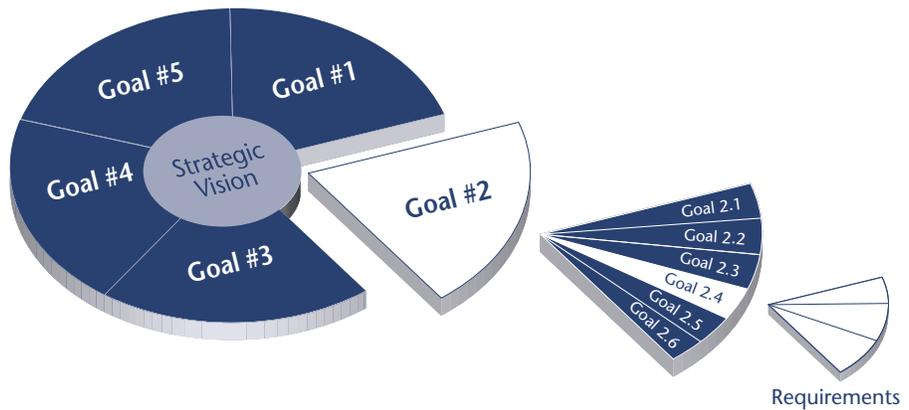
Threats
Leaders and members of breakthrough development programs must be wary of their "threat." This threat might be an adverse user outcome or an unnecessarily burdensome practice that would negatively impact ongoing operations.
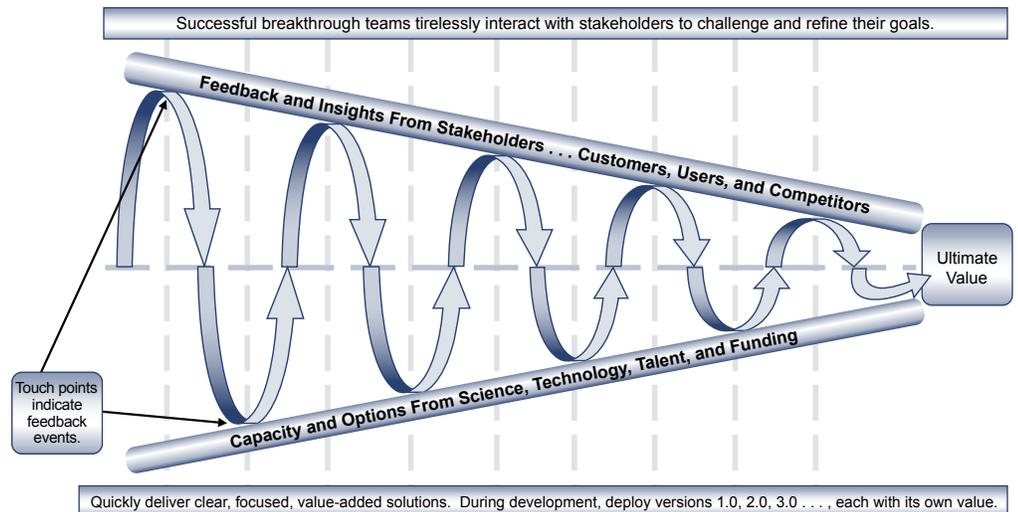
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Breakthrough Development

Goals

Old goals are likely to be wrong goals. Too often, we have seen teams remain focused on solving an initial set of problems defined at the outset of the program, ignoring the evolution that is continually occurring in stakeholder needs, science, technology, talent, funding, and the marketplace.

"Inchstones"

One contributor reinforced an emphasis on rapid development by referring to milestones as "inchstones."

This practice draws attention to the fact that the next deliverable is always only a short distance away.

Successful breakthrough teams tirelessly interact with stakeholders to challenge and refine their goals.

Feedback and Insights From Stakeholders . . . Customers, Users, and Competitors

Ultimate Value

Touch points indicate feedback events.

Capacity and Options From Science, Technology, Talent, and Funding

Quickly deliver clear, focused, value-added solutions. During development, deploy versions 1.0, 2.0, 3.0 . . . , each with its own value.

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5. **Manage for Success**

    BD success is not accidental. Effective BD programs ensure they have the right competencies, authority, resources, processes for regular reviews, and other management tools to ensure collaboration is effective and developments are delivered on schedule and within budget.

    Successful processes, practices, and policies can be organized into four areas:

    *   **Build Program Support** – Manage interactions with others to ensure the program adds value. Proactively identify those in a position to help or hinder progress, and devise strategies to ensure they support or, at minimum, do not become obstacles to success.

        Be candid about risks, issues, problems, and what you can and cannot do to address them. Involve potential critics and adversaries in project execution by including them in meetings or assigning them tasks that leverage their interests and capabilities.

    *   **Ensure A Focus on Value Added Solutions** – Implement practices and policies that are aimed at forcing the team to consider, and continually reconsider, the value they are adding to the organization. Seize opportunities to point out how the solution will solve specific problems or meet special needs. Market the solution by emphasizing the value it will add to the organization, customers, and other stakeholders.

    *   **Build Team Relationships** – Provide the time and opportunity for the team to interact and get to know and trust one another. Create opportunities and environments to optimize informal interaction, including co-location, open workspaces, and low cubicle walls. Commit time and effort to work through personality and intellectual conflicts to build respect and trust within the team.

Concept Visualization

Concept Visualization techniques enhance written material and help users and other stakeholders understand the solution being developed. Whether a picture, storyboard, or physical model, visual representations of the current stage and end result are essential tools to communicate progress and value.

The visual model should drive every team meeting. Start with a review of changes made to the model since the last meeting, then agree on what changes will be made by the next meeting and the implications for costs, risks, and timeline.

Meetings are simplified and shortened when focused on progress and risks. The effort of producing "meeting materials" just to manage the meeting is eliminated. It is important that virtual team members have current visual models in hand prior to each meeting.

The BD Program Manager (BDPM) should continually assess team members' skills, attitude, ability to take risks, appetite for collaboration, and ability to deliver solutions quickly. The BDPM should quickly remove team members whose performance or behavior is consistently problematic or insufficient.

- **Ensure Collaboration** – Establish milestones at the beginning of the project, including a schedule of regular meetings with senior management to review progress, challenges, and risks to mitigate.

  Team meetings should occur at least weekly, and sometimes daily or hourly, to sustain team momentum, alignment, and focus, and to respond to fast-changing user needs.
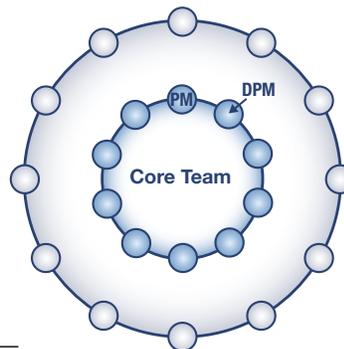
6. **Embrace Stakeholders**
Customers and users may be two different stakeholders for the initiative. There may be additional internal and external stakeholders as well. Identify each group, their specific motivations and needs, and design the solution with all stakeholders in mind.

Actively manage team composition to ensure it is competent in the relevant subject matter. Your BD team should include individuals who are, or who are experienced as, customers, users, policy professionals, acquisition and purchasing experts, systems engineers, security experts, and other competencies relevant to your development. Competent team members can see risks and catch mistakes quickly, then rapidly devise and evaluate potential solutions.

Teams must include representatives from stakeholder organizations – people who can make decisions for their organizations – to dramatically improve the odds for breakthrough development success. With decision makers who act as partners immediately available, no valuable time is wasted by the BD team moving inadvertently on a wrong path.

Core Team = 🔵

- Acquisition and Purchasing
- Configuration Manager
- Customer/User or Product Manager
- Funder
- Program Manager
- Outsourcing Partner
- Software Engineer
- Systems Engineer
- Technical TBD
- TBD

Note – one of these team members serves as a Deputy Program Manager (DPM), a leader able to immediately manage the program, if necessary.

Support Team = ⚪

- Additional Users
- CIO-CTO Professional
- Financial Manager
- Hardware and Materials Engineer
- Human Engineering and Training
- Implementation Management and Assurance
- Legal
- Sales
- Security (information, people, physical infrastructure)
- Supply Chain and Logistics
- TBD

Core team

The core BD team should be small, ideally no more than 10 people, and have full authority and responsibility to define and deliver their product or service.

Because of the untraditional freedom and charter to act quickly, not everyone can be successful in a BD environment. Core team members must be experienced, qualified, and counted on to be effective.
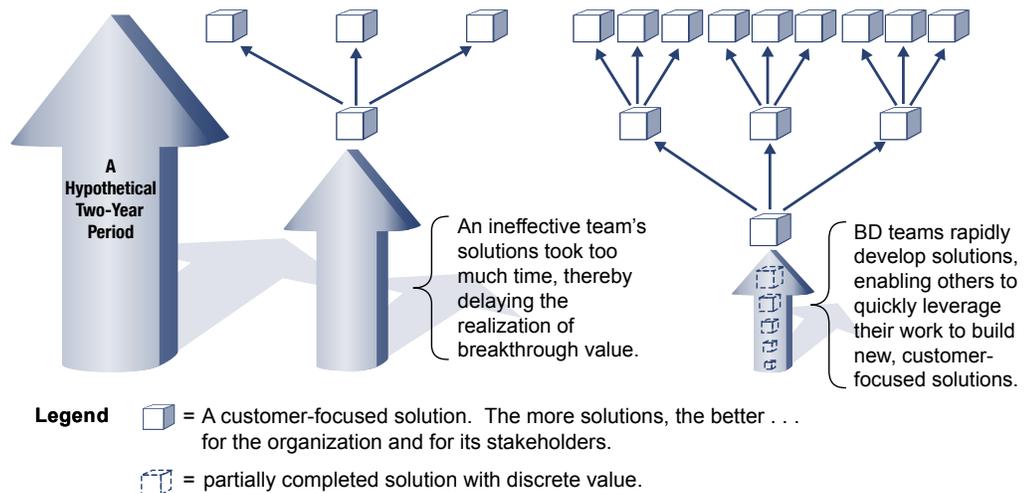
Team member attributes

To improve the odds of success, BD leaders and team members should be:
- experienced,
- well-informed,
- empowered with both authority and control,
- free to experiment,
- free to choose their focus and methods,
- responsible and account-able for delivering real value, and
- recognized and rewarded for delivering value on-time, on-budget, and on-target.

7. Watch the Clock

Time is a critical element in breakthrough success. Delays not only jeopardize the opportunity to deliver value, but can damage the ability of a team to deliver an effective solution. Scope creep, employee and contractor turnover, technology evolution, and changing needs can all move BD programs off target.

Systematically identify areas of risk and develop mitigation plans early enough on the critical path to ensure program success. Involve customers and users when weighing whether to deliver a solution with identified risks or to miss delivery deadlines. The customer or user may see advantages to receiving incremental or flawed solutions as an interim step to final success, compared with continuing to operate with no solution at all.

A Hypothetical Two-Year Period

An ineffective team's solutions took too much time, thereby delaying the realization of breakthrough value.

BD teams rapidly develop solutions, enabling others to quickly leverage their work to build new, customer-focused solutions.

Legend ☐ = A customer-focused solution. The more solutions, the better . . . for the organization and for its stakeholders.

⬚ = partially completed solution with discrete value.

Leadership and Talent

Without competent leadership and talent, these breakthrough principles will be ineffective. Just *practicing* these principles, to check off that they have been covered, will not ensure success. Each principle must not just be addressed periodically, but instead be ingrained in the hour-by-hour behavior of everyone critical to success.

When constituting a team, senior leaders need to deliberately define competency requirements for the challenges presented by the breakthrough, and then ensure the team is positioned to fill those requirements. Breakthrough development initiatives should *not* be considered a training appointment for fledgling team members.

BD success relies on a strong, experienced leader who is competent as both a program manager and in the end-user or technical challenges critical to success. The program manager must be an empowered decision maker and the single point of accountability for team success. The program manager is accountable for sustaining a seamless partnership with, and managing the expectations of, all stakeholders – senior leaders, customers, users, funders, contractors and their senior leaders, and team members.

Acknowledgement of Additional Contributors

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Breakthrough Development

INSIGHTS

We publish *Strategy Implementation Insights* periodically to encourage dialogue on strategy implementation effectiveness.

We invest in developing and publishing *Insights* chapters to share the lessons we learn during consulting engagements, supplemented by our ongoing research.

Our readers are encouraged to pass this *Insights* chapter along to others, or contact us for additional copies.

Please visit our Web site at www.implementstrategy.com for other chapters of *Strategy Implementation Insights,* and the sites for our sister firms: www.bepartners.com and www.ciogroup.net.

McCreight & Company
STRATEGY IMPLEMENTATION CONSULTANTS
Agility • Creativity • Experience • Integrity

Research & Operations Center
36 Grove Street
New Canaan, CT 06840

Tel: 203.801.5000
Fax: 203.801.5013
roc@implementstrategy.com
www.implementstrategy.com

Our Firms

McCreight & Company partners with clients worldwide, helping to ensure their competitive superiority, designing and guiding the implementation of sound and sustainable strategy. Our unique consulting and operating experience evolved while partnering with many of the world's most respected leaders and most dynamic organizations. Our capabilities are further enhanced by our two sister firms – Board Effectiveness Partners and the CIO Group.
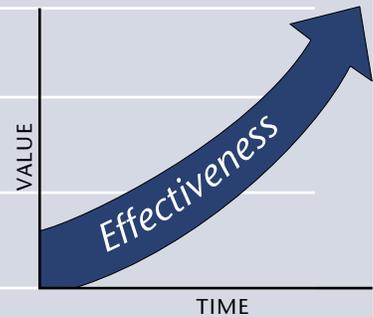
How We Add Value

Analyze and refine strategy

Define implementation initiatives with timelines and milestones

Define implementation roles, accountability, and resources

Monitor implementation progress and identify and help mitigate roadblocks

VALUE

Effectiveness

TIME

Our Goal

Our goal is to ensure strategy is sound, sustainable, scalable, and successfully implemented, on-time, on-target, and on-budget. We partner with clients in designing and implementing strategic change, including: global growth, leadership transitions, board and director effectiveness, business restructurings, new business launches, mergers, acquisitions, joint ventures, and alliance partnerships.

Industry Competencies

- Aerospace
- Automotive
- Communications
- Defense
- Foundations
- Information & Technology
- Intelligence
- Life Sciences & Health Care
- Media
- Professional Services

Our Chairman

JOHN MCCREIGHT has devoted over 35 years to consulting and partnering with CEOs, senior management, boards, and investors, defining and implementing large-scale strategic change. Mr. McCreight leads every engagement and is professionally involved on site.

Alliance Partners

Each strategy implementation engagement is unique in terms of our client's needs, our response, and the consulting competencies and professionals involved. McCreight & Company nurtures relationships with over 100 alliance partners worldwide. They strengthen our capacity to ensure our clients' success. Our alliance partners exemplify preeminence in their fields and they complement our core competencies.

Research & Operations Center (ROC)

Our ROC professionals are linked globally to our clients, alliance partners, industry experts, and the academic community. We focus daily on monitoring facts, opinions, successes, disappointments, lessons learned, and emerging best practices in many areas, including board and director effectiveness, information and technology, and the issues and challenges that impact strategy development and implementation.