Thumbtack Technology dedicates its resources to building bulletproof, highly targeted and tested software. The Thumbtack Implementation Process (TIP) is a carefully constructed software development methodology tailored to organizations with complex business requirements and low tolerance for system faults. TIP provides a complete software lifecycle solution, from discovery through application deployment and support. The TIP is optimized for hybrid local and offshore development teams, having evolved from our experiences building mission-critical systems and examining fault patterns in inherited systems.

In a culture of continuous improvement, Thumbtack Technology constantly evaluates which successes are repeatable, with the goal of incorporating these successes company-wide, while focusing on four key principles:

1. Define concrete, achievable, quantifiable steps

2. Deliver high reward/low risk elements first

3. Loosely couple systems to reduce systemic risk

4. Develop massively scalable software to handle increased loads

HOW VALUABLE IS A FORMAL PROCESS?

Approximately 30-70% of IT projects fail or exceed budget. Why? Organizations attempting to increase capacity through a vendor often lack resources to maintain necessary accountability, shifting accountability to the vendor. Generally, the vendor's deliverability is based on its recommended processes, a challenging scenario when business processes are not geared to scaling an external software team. When the enforcement of tasks and project management oversight are not properly carried out, projects fail or exceed budgetary limits.

At Thumbtack, we are defined by our processes, from recruitment to talent retention to measuring software quality. The Thumbtack Implementation Process ensures our engagements consistently adhere to the four key principles, and guarantees our distributed development teams function as an integrated unit.

DISTRIBUTED DEVELOPMENT TEAMS
Today's technological environment demands that a significant portion of development will occur in different countries with distributed teams. Process is crucial to maintaining high quality when delivering critical systems components; however, the distributed teams model complicates quality control.

Thumbtack enthusiastically embraces a hybrid development model, which includes:
- Local project management and technical architecture
- The majority of our developers working remotely
- Appropriate scaling at the necessary technical caliber
- Top-notch talent acquisition- prioritizing finding, training and retaining the right people

NEW CHALLENGES EMERGE, HOWEVER, WHEN TEAMS ARE DISTRIBUTED ACROSS THE MILES:
Standard Software Development Challenges
- Requirements are clear and understood across business units
- Priorities are consistent and aligned with major business goals
- Changes should be expected and should impact development in predictable ways
- Functional and user-acceptance testing should be aligned with requirements

Additional Challenges for a Distributed Team

- Coordination of communications between team members, explicitly and across time zones
- Transparent collaboration on documents and other assets
- Clearly identified and described technical integration points
- Resources secured behind corporate firewalls
- Grasping cultural differences as they relate to quality

The Thumbtack Implementation Process addresses these standard challenges, providing directed, quantifiable, high-performance and low-failure core systems.

SUMMARY

The Thumbtack Implementation Process guides Thumbtack every element of software development, from discovery through application deployment and support.
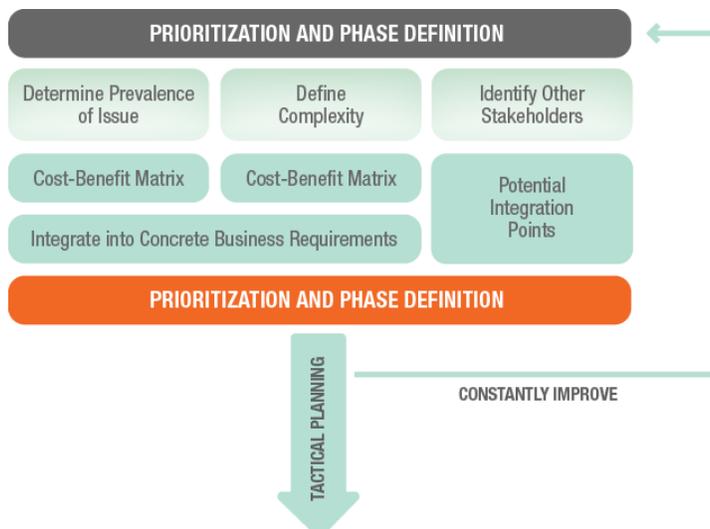
TARGETED DISCOVERY AND ANALYSIS

BENEFIT-CENTERED TACTICAL PLANNING

AGILE, TEST-DRIVEN DEVELOPMENT PROCESS

DEPLOYMENT VIA CONTINUOUS IMPROVEMENT

TARGETED DISCOVERY AND ANALYSIS

The Thumbtack Discovery Proc ess provides a blended approach to mitigation, based on the identification of key pain points, strategic assessment of solutions, and an evaluation of existing infrastructure.

Thumbtack advocates a phased approach for three reasons:

1. Expense: High cost of major company infrastructure 'revamp' initiatives

2. Failure Rates: High failure rates of large initiatives

3. Value Benefits: Phasing offers the highest value benefits earlier in the project

DISCOVERY WORKFLOW

PRIORITIZATION AND PHASE DEFINITION

Determine Prevalence of Issue	Define Complexity	Identify Other Stakeholders
Cost-Benefit Matrix	Cost-Benefit Matrix	Potential Integration Points
Integrate into Concrete Business Requirements		

PRIORITIZATION AND PHASE DEFINITION

TACTICAL PLANNING

CONSTANTLY IMPROVE

BENEFIT-CENTERED TACTICAL PLANNING

The Thumbtack Tactical Planning Phase focuses on reducing risk and increasing parallelization of tasks.

KEY PRINCIPLES

Loosely integrate systems, allowing multiple teams to work and optimize in parallel

- Ensure well-specified entry points into every system, with full test coverage. If a piece must later be enhanced or replaced, automated tests can measure impact
- Design every component with a full audit trail at each layer, as if its peers might fail
- Design systems for optimum performance, regardless of the time or environment. All behaviors should be consistent and repeatable across any environment
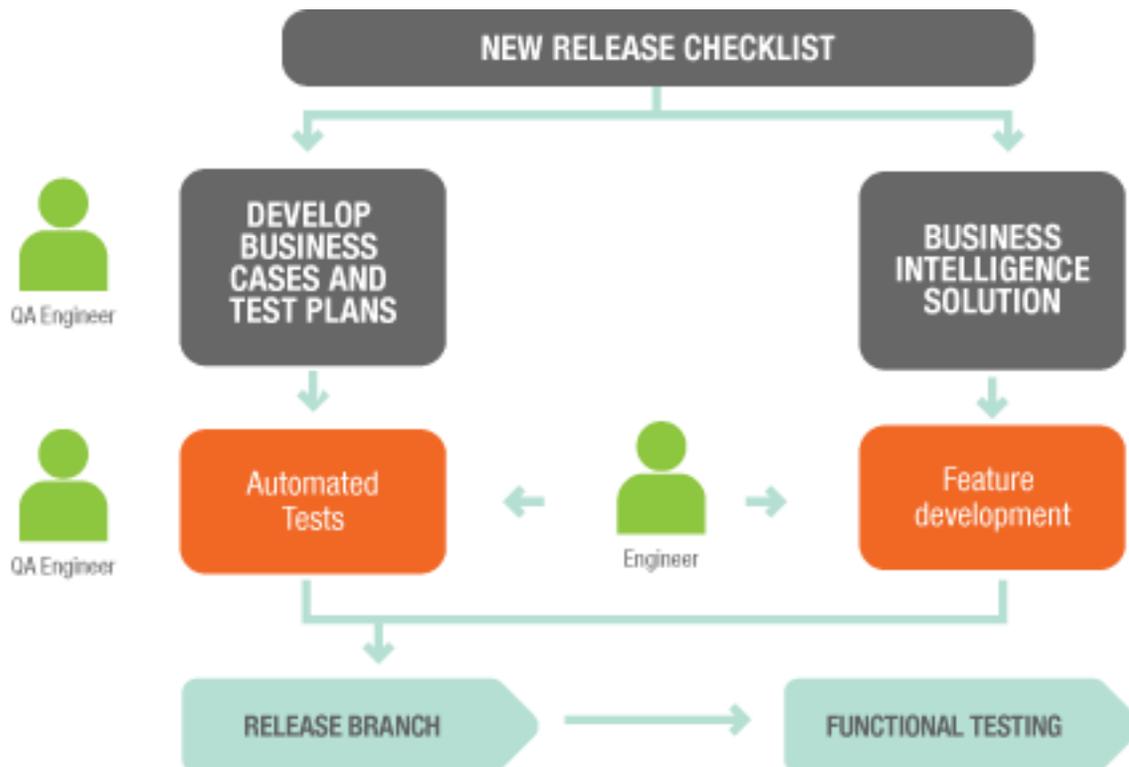
THUMBTACK DEVELOPMENT METHODOLOGY

Thumbtack Development Methodology is an end-to-end software development system delivering flexible, tested code and high-performing software the client can easily learn and extend. One example is Agile and Test-Driven Development, but this extends further up and down the stack.

Agile methodology, with short releases and Scrum-like management.
- Test-driven coding process, using continuous integration
- Two-phase code review process: Each external team's code is monitored by the other external teams, ensuring cross-team quality and diffusion of knowledge
- Developers have private out-of-band projects and share knowledge through special meetings
- Engineers are encouraged to both take and teach classes at local universities

WORKFLOW

DEPLOYMENT AND CONTINUOUS IMPROVEMENT

Thumbtack provides full software lifecycle services through production deployment.

The standard deployment preparation process includes:
- Building clones of the production environment in the cloud
- Creating a formal development -> staging -> production workflow
- Catching potential stumbling blocks with a sample rollout in the cloud
- Offering extended support during deployment
- Geographic dispersal for 24x7 support during production rollouts
- Post-mortem analysis during production: What worked? What can be improved in future iterations?
- Analysis is:
    - Presented to the client as a list of recommendations
    - Incorporated into our processes

CONCLUSION

In summary, Thumbtack Technology offers 4 key benefits:
- Discovery
- Tactical Planning
- End-to-End Software Development System
- Continuously Improved Cloud-Based Deployment

While our concentration is on software development, we realize not every solution is technical. Therefore, we focus on developing processes to enhance and improve operational efficiency and revenue. This business-centric approach assures your organization enjoys clearly defined goals and a transparent, easily monitored process that satisfies the cost-benefits concerns of stakeholders. Keeping our sights on risk mitigation, minimal systems impact, and scalability translates to dramatically reduced training, planning, deployment and management costs.

Please contact Thumbtack Technology today to learn more about customizing a solution for your organization.