G CHI software

Empower, Accelerate, Save:

Unconventional Development Effic<u>iency</u>

A publication of CHI Software

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Intro

In recent years, the importance of cost reduction in every industry, including software development has significantly increased. As businesses face mounting pressure to deliver more with fewer resources, cost optimization has become essential for both business survival and success.

With escalating expenses associated with software development, including talent acquisition, education, infrastructure, and maintenance costs, organizations need to find ways to accelerate development without compromising on quality or innovation.

Software development has become an integral part of businesses across all sectors. In this increasingly competitive and costconscious landscape, organizations must recognize the critical importance of cost reduction in software development. By prioritizing cost optimization, businesses can maximize profitability, gain a competitive edge, and drive sustainable growth.

The Growing Significance of Cost Reduction

According to the latest research, among the organization's top priorities in 2023, reducing IT costs takes the leading place.

Which of the following will be your organization's top IT priorities in 2023?



This ebook will explore techniques for effectively managing the interplay of cost, quality, and speed, presenting a distinct methodology for resource training and management. In the following chapters, we will explore the business objectives and effective ways to manage them.

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Intro

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| costs |
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| ecurity risks |
| ligital transformation |
| ew technology to improve day-to-day operations |
| npany growth |
| ng business continuity in financial uncertain times |
| customers service and satisfaction |
| ovation for competitive advantage |
| company more sustainable |

Making employee more productive

Improving employee satisfaction

Safeguarding business continuity during natural disasters

Source: Snow Software IT Priorities Report

Balancing cost, quality, and speed: the key business objectives

Achieving cost reduction in software development is not a standalone objective. It must be balanced with other crucial considerations, namely quality and speed. In this chapter, we will explore the interplay between cost, quality, and speed and understand how organizations can strike the right balance to achieve optimal results.

The primary business objectives for balancing cost, quality, and speed:



Efficient Resource Allocation

Effective resource allocation is crucial for cost reduction and maintaining high quality and speed. By optimizing skills and tasks, organizations can save costs and achieve timely delivery without compromising software development quality.



Streamlining Development Processes

Organizations strive to eliminate inefficiencies and streamline their development processes to reduce costs. This involves adopting agile methodologies, automating repetitive tasks, and optimizing resource allocation to maximize productivity and minimize wastage of time and resources.



Meeting functional and non-functional requirements

Software should meet both functional and non-functional requirements defined by stakeholders. Organizations must ensure that their development processes incorporate effective requirements gathering, validation, and verification techniques to deliver software that meets customer expectations.



Implementing rigorous testing

A robust testing strategy is crucial for identifying and addressing defects early in the development cycle. By implementing comprehensive testing methodologies, including unit testing, integration testing, and user acceptance testing, organizations can minimize the occurrence of software bugs and deliver high-quality solutions.



Continuous improvement

Organizations should strive for a culture of continuous development and improvement to enhance quality standards. This involves collecting and analyzing feedback, conducting post-project reviews, and implementing lessons learned to refine development processes and deliver even higher-quality software in subsequent projects.



Effective project planning

Thorough project planning, including defining milestones, setting realistic deadlines, and identifying critical dependencies, is vital for achieving timely delivery. We recommend adopting project management methodologies, like Agile, and tools to facilitate effective planning and tracking of project progress.



Agile development practices

Agile methodologies like Scrum or Kanban enable faster and iterative development cycles, allowing organizations to strike a balance between speed and efficiency and remain competitive.



Efficient communication and collaboration

Clear and efficient communication and collaboration are essential for avoiding delays and maintaining project timelines. By fostering a collaborative environment that encourages effective communication, feedback sharing, and prompt decision-making, organizations can ensure smooth project execution.

In the following chapters, we will explore the effective ways to cut costs keeping quality and speed high.

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Chapter 1



Building a Staffing Lab Program with Effective Squads to Save **Company Costs and Quality**

Here we share our experience and one of the most effective ways so far to cut software development costs by 15% without sacrificing quality. It also lead us to improved retention up by 20-25%.

In this chapter, we share our company's experience of creating a unique Staffing Lab Program with high-performing CHI Squads, taking traditional staffing to a higher and more efficient level.

Overview of CHI Software Staffing Lab Program

Understanding the global importance and the crucial need for our clients to reduce costs in software development, in hiring the most suitable candidates to keep quality and speed high, we have created a unique Staffing Lab, powered by a big pool of in-house experts, a wide range of subcontractors worldwide and our unique high-performing teams - CHI Squads.

We extensively researched the traditional staffing methods, with a specific focus on Middle/Senior level developers who encounter notable challenges when they become part of new development projects.

Among the factors that predominantly influence the pace and outcomes - communication gaps, inadequate soft skills, difficulty in quickly assimilating into a new team, and adapting to urgent changes.

On the contrary, a well-selected, well-trained and adapted to the development project environment engineers indeed can contribute to cost reduction without quality or time loss on a project.

Therefore, in March 2022 we tried something completely new - Staffing Lab with CHI Squads.

Below is a Comparison table of a traditional staffing and CHI Staffing Lab Traditional Staffing vs CHI Staffing Lab

| Aspect | Traditional Staffing | CHI Staffing Lab |
|----------------------|--|---|
| Recruitment Process | Sourcing, job postings, resumes screening based on average requirements | Coordination with the company tech departments for more precise candidates requirements and search |
| Candidate Evaluation | Basic Technical skills assessment, interviews, reference checks | Several rounds of both technical and non- technical interviews for a more accurate candidate evaluation |

| Employment Model | Full-time or part- time employees, possibly freelancers/ contractors | Full-time or part- time employees, possibly freelancers/ contractors |
|-------------------------|---|--|
| Cost Structure | Fixed salaries or hourly rates, benefits, overhead costs | Fixed salaries or hourly rates, benefits, overhead costs |
| HR Involvement | HR department manages recruitment and hiring | HR, Recruitment and Development Departments manage recruitment and hiring evaluation |
| Onboarding | Extra time for formal onboarding process, orientation, training | No extra time needed for candidate training or onboarding |
| Staffing Scalability | Limited scalability based on workforce capacity | Improved staffing scalability thanks to training programs |
| Flexibility | Less adaptable to sudden changes in project scope | More adaptable for changes on a project |
| Long-term Commitment | Typically long- term employment commitments | Both short term and long-term employment commitments |
| Skill Specialization | Specific skills required, limited cross-functional abilities | Better cross-functional abilities thanks to acquired training |

Staffing Lab and Squads Innovation

There is a special Engineering Development Program at CHI Software. It is a regular in-house initiative that covers several growth directions and offices: Project Management (PM) Office, Chief Technology Office (CTO Lab), and R&D Center.

The CTO Lab program offers a well-balanced blend of theory, practical skills, and interactions with experts to deliver the handson experience necessary to help make transition to Senior technical positions: Solutions Architect and Team Lead. This program is also responsible for continuous developers development and certification in Amazon and Microsoft competences. It has a committee responsible for Senior software developers professional growth, including continuous education, acquisition of practical skills and further career development to Mentorship within the company. Below is a Staffing Lab structure.



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Staffing Lab structure

Engineering Development Programs: CHI CTO Lab prepares Solutions Architects and Team Leads

All Solutions Architects and Team Leads prepare and teach Mentors for CHI Staffing Lab

Thorough selection of developers to special CHI Squads, based on company needs

Work on clients' projects with clearly defined processes, procedures, tasks, and flows

Mentorship procedures

As a professional growth stage, every Solutions Architect and Team Lead in our company prepares and trains Mentors for Staffing Lab in their specific field of expertise.

Prior to becoming Mentors, these candidates should:

Establish a track record: a future Mentor should demonstrate their expertise and effectiveness delivering high-quality work, exhibiting leadership skills, and fostering a positive team environment. They must build a reputation as a reliable and knowledgeable professional.

Undergo regular performance review (including growth plan discussion)

Comply with Matrix Skills (both hard skills and soft skills)

Take active part in company life: webinars, techtalk, writing articles to foster a constant learning culture.

CHI Squads

CHI Staffing Lab continuously conducts Squad selection and trainings to develop on-demand technology stack. Regardless of the Squad to which developers belong, they are gaining both exceptional soft and hard skills to be equally effective on every new project within the CHI Squad or separately inside client teams.

To simulate a full-cycle development project, every Squad has a Team Lead, front and backend developers, QA and mobile (on demand). The project is led by a PM who follows all Scrum ceremonies. We always coordinate all our training programs with the company departments: Mobile, Frontend, Backend, PM and QA.

Scrum ceremonies

Daily sync-up Daily short meetings of the entire team are held with the goal to synchronize all team members.

Grooming and Estimation

This is a regular event where we assess, analyze, and restructure the backlog.

Script Planning

This is a meeting at the beginning of the sprint where we discuss and make decisions about the work that will be completed in the sprint.

Moreover, all our training programs are based on the corporate Delivery policy, including the following Scrum ceremonies.



Retrospective

This is a meeting at the end of each sprint that allows a team to identify their own areas of growth, develop changes, address current issues, and address potential or existing difficulties.

Demo

It involves the entire team demonstrating the product developed in the last sprint. Our unique comprehensive and rigorous approach to education and training that combines continuous acquisition of theoretical knowledge with their immediate practical application brings CHI Software continuous success and if applied correctly will help a development team of any size to speed up its development process while becoming more cost effective.

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Staffing Lab and Squad approach benefits



Real cost reduction:

It helps reduce hiring, staffing and development costs by 15% while increasing our staff retention rate by 20-25% since the inception of the program.



Quick adaptation

Squad members are capable to quickly adapt to either a new project of their Squad or quickly integrate into clients' teams.



Continuous professional development:

tech talks, webinars, etc.



Great opportunities for candidates search: Not only on job sites, but also based on close

communication with IT Clusters and communities.



Thorough approach to candidate selection:

We have developed a set of programs and detailed flows for every expertise and vacancy type.



Squad programs:

The program of each squad is already synchronized with the training program in the department. It means we prepare candidates for needed departments and tasks.



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Training programs:

These programs are designed with a focus on the future IT market trends and the needs of our clients.



Our squad programs are taught by seasoned Senior Level developers.



Streamlining Recruitment, Staffing and Delivery Policies

By incorporating Scrum ceremonies and Agile development practices into our training programs, CHI Squad members gain valuable skills that bridge the gap between theoretical learning and real-world application. This approach not only enhances their understanding of project management but also equips them with the necessary skills, tools and experience for more effective work. Efficient Recruitment, Staffing, and Delivery Policies are crucial for both our company and our clients' businesses, aiming to significantly cut software development costs while maintaining high quality and accelerating speed.

This chapter delves into the key considerations and strategies we suggest other organizations can employ to optimize their talent acquisition processes, streamline staffing efforts, and establish effective delivery policies.

Developing an effective Hiring Policy to ensure organizational success and growth

1. Talent Acquisition and Recruitment

Developing an effective hiring policy to ensure our clients' organizational success and growth requires careful consideration of various factors, including a well-defined recruitment process, unbiased selection criteria, and the implementation of fair and inclusive practices.

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1.1 Defining Clear Job Requirements

To ensure efficient recruitment, it is imperative to clearly and meticulously define the required skills, experience, and qualifications for each position. This allows the recruitment team to accurately evaluate potential candidates, reducing the time and effort spent on unsuitable candidates.

1.2 Building an Effective Candidate Pool

Employing various sourcing channels, such as job portals, social media, and industry-specific networks, helps create a diverse and robust candidate pool. In our case, we have some helpful extras, i.e. CHI Staffing Lab alumni. This program ensures access to a wider range of talented individuals, a more prepared development resource, increasing the chances of finding the candidate who matches each specific task and role.

1.3 Structured Interviewing and Assessment

Implementing a thorough interview process predetermined by inhouse Departments criteria enables fair and unbiased evaluation of candidates. Using such a strict approach to candidate selection, with both behavioral and technical assessments in addition to interviews provides valuable insights into a candidate's suitability to be trained fast and become an effective Squad member.

1.4 Collaboration between Recruitment and Technical Teams

Continuous communication and collaboration between the recruitment and technical teams is essential. The initial request for new resources is agreed upon and approved within development and recruitment teams. Regular feedback from technical experts during the recruitment process ensures that candidates possess the necessary skills and knowledge to meet requirements.

Developing a productive Staffing Policy to ensure our clients' business success

2. Streamlining Staffing Efforts

Developing an effective Staffing Policy to ensure organizational success and productivity requires a strategic approach that aligns the workforce with the company's objectives, values, and long-term vision. This involves conducting a comprehensive analysis of the organization's current and future staffing needs, including assessing skill gaps, forecasting talent requirements, and identifying critical roles. This policy establishes clear guidelines and procedures for recruitment, selection, placement, and career development, while also considering diversity and inclusion to foster a vibrant and inclusive work environment.

Furthermore, our Staffing Policy emphasizes continuous evaluation and improvement, incorporating feedback from employees, managers, and clients, as well as monitoring key performance indicators to gauge the policy's effectiveness.

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By implementing proactive talent management practices, such as succession planning, CHI Squad program, and employee retention strategies, this policy ensures a consistent supply of skilled and motivated individuals who are well-suited to contribute to the organization's success.

2.1 Resource Pooling and Allocation

Maintaining a centralized in-house resource pool helps us identify available talent within the organization, ensuring efficient utilization of existing resources before considering external hiring (contractors). Allocating resources based on skill sets, project demands, and employee preferences optimizes staffing efforts and reduces recruitment costs.

2.2 Flexible Staffing Models

Embracing flexible staffing models, such as utilizing contractors, freelancers, well-trained in-house developers or remote workers, offers cost-effective alternatives to traditional full-time hires. This allows our clients to scale their workforce based on project requirements while reducing long-term employment costs.

2.3 Employee Skill Development Programs

Investing in continuous skill development programs for existing employees improves their expertise and enables internal mobility. This approach minimizes the need for external hiring and fosters a culture of growth and learning within the organization.

Developing a robust Delivery Policy to ensure development efficiency and high quality

3. Establishing Effective Delivery

In today's fast-paced business environment, it is crucial for IT companies to have a streamlined delivery policy that ensures efficiency and maintains a high standard of quality. A well-defined and structured delivery policy not only helps organizations meet their project deadlines but also enhances customer satisfaction. This chapter will explore various strategies we use for developing a robust Delivery Policy from the entry level to the Top Management that drives our clients' success.

One innovative approach is the incorporation of Scrum ceremonies within the training programs, enabling engineers to gain invaluable experience and proficiency in project management.

4. Effective Project Planning and Estimation

A fundamental aspect of our unique training program is giving engineers the ability to engage in thorough project planning and estimation. By defining milestones, establishing realistic deadlines, and identifying critical dependencies, engineers learn the importance of organized and structured approaches to project management. Utilizing methodologies such as Agile, engineers are equipped with the necessary tools to facilitate effective planning and tracking of project progress, fostering a sense of responsibility and ensuring timely delivery.

5. Agile Development

Our training program recognizes the significance of agile methodologies, specifically Scrum or Kanban, in nurturing engineers ability to engage in faster and more iterative development cycles. By breaking down projects into manageable sprints, engineers learn how to approach complex tasks systematically and incrementally. Implementing agile practices in software development equips our engineers with the skills to strike a perfect balance between speed and efficiency. By embracing an iterative approach, fostering collaboration, and embracing change, engineers are empowered to consistently deliver high-quality results within shorter timeframes. This proficiency not only meets customer expectations but also prepares engineers for the demands of the competitive job market.

Optimizing corporate Recruitment, Staffing, and Delivery Policies is vital for any company seeking to cut software development costs while maintaining high quality and accelerating speed. By following the strategies outlined in this chapter, organizations can establish effective talent acquisition processes, streamline staffing efforts, and implement delivery policies that lead to substantial cost savings. Investing in optimized recruitment, staffing, and delivery practices not only drives efficiency but also fosters a culture of innovation and excellence within the IT company.



Chapter 3

Conclusions

This ebook has demonstrated that cost optimization in software development is not merely about cutting expenses but rather about thinking out of the box and adopting a strategic approach.

By implementing the insights and recommendations presented in these chapters, organizations can navigate the complex landscape of hiring, achieve significant savings, enhance the quality of their deliverables, and position themselves for long-term success in the competitive software development industry.

We hope you will effectively implement the practices outlined in this ebook and experience even more substantial improvements in efficiency, speed, and retention than we have achieved. Good Luck! As always the CHI Team is at your services.

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