

Transcript of Synputer Computing – Project Update

Introduction

Good afternoon, ladies, and gentlemen. I am Andrius Busilas, currently enrolled in an MSc program focusing on Software Engineering Project Management, and I am thrilled to share with you today the latest updates and complexities of the Synputer project, a joint venture with English Digital Computers.

During this session, I will offer a thorough review of our advancements, elaborate on the revised requirements that have emerged from stakeholder input, address the implementation schedule, and highlight our budgetary considerations and risk-mitigation approaches. Through the conclusion of this presentation, you will have a comprehensive grasp of our current position and the necessary steps for moving ahead.

Agenda

Let us begin our discussion by examining this agenda. I will address the following main topics.

- Synputer Project Overview: We examine the initial objectives and obstacles encountered.

- **Current Status and Key Milestones:** An update on our manufacturing status and notable achievements.
- **Updated Requirements:** We will examine the modifications to the system requirements based on EDC feedback and explain their necessity.
- **Project Timeline Overview:** It will present the project phases and specific sprint plans.
- **Budget and Cost Analysis:** We assessed the financial impact of our modifications, particularly regarding the pricing approach.
- **Proposed Solutions for EDC and Market Demands:** We outline our plans to satisfy EDC's expectations while addressing market demands.
- **Risk Management and Challenges:** We will explore potential risks and strategies for effective management.
- **User Acceptance Testing and Deployment:** It will detail our testing procedures and implementation process.
- **Conclusion and Next Steps:** We conclude by discussing the next steps for the project and our plan moving forward.

Now, let us begin with a project synopsis.

Project Overview

In reviewing the Project Overview, it is essential to consider the initial objectives we set for the Synputer project. The Synputer was originally envisioned as an economical mobile computing device for individual and corporate users. The intention was to strategically positioning Synputer in the swiftly expanding home computing sector, addressing the growing need for affordable, yet capable computing solutions.

Key Challenges:

As the project progressed, we encountered several notable difficulties that necessitated reevaluating our strategy. A key issue arose from the input provided by EDC, which is one of our principal stakeholders. EDC stressed the importance of a stationary unit, which deviated from the initial portable concept. They also underscored the necessity of enhanced specifications to meet current industry benchmarks, particularly in terms of performance, reliability, and compatibility.

This feedback compelled us to reconsider our design and manufacturing approach, ensuring alignment with the EDC's operational needs, while also improving the overall user experience. Tackling these challenges is vital not only for fulfilling our contractual commitments but also for securing the long-term viability of the Synputer product line in the marketplace.

To adapt effectively to these modifications, we engaged in multiple conversations with the EDC to thoroughly comprehend their requirements and expectations. Their perspectives proved invaluable, steering us toward a more robust and adaptable design that we believe will resonate with a wider audience while meeting our contractual obligations.

Current Status and Key Milestones

Let us now examine the present situation and its notable achievements.

We reached a significant milestone by manufacturing 1,000 units of the standard Synputer model. This initial production run serves as a crucial reference point for evaluating manufacturing abilities and quality assurance procedures. Additionally, our marketing team has initiated a pre-order campaign, which has sparked considerable interest, resulting in 3,000 advance orders at a listed price of \$399.99.

Key Accomplishments:

We have reached several important milestones.

These achievements have established a robust foundation for this project. For instance, finalizing the initial prototype development enabled us to collect vital feedback for the design refinement. The input from the EDC, received in November 1983, was crucial in pinpointing areas for enhancement and ensuring that our product aligned with their expectations.

The significant project modifications identified in December 1983 emphasized the need to swiftly implement necessary changes to ensure that the Synputer meets both technical requirements and market demands. These milestones not only showcase our progress, but also highlight the ongoing need for collaboration with the EDC and other partners.

Thus far, our achievements have reflected our team's commitment and hard work. We have been closely tracking production metrics to maintain quality standards and promptly address issues. The enthusiastic response to our pre-order campaign demonstrates market interest in Synputer, reinforcing our confidence in our chosen direction.

Updated Requirements

Let us now examine the revised requirements and rationale.

Following EDC's input and a comprehensive evaluation of market trends, we pinpoint several updated specifications for the Synputer system. These specifications are essential for ensuring that the product remains viable and competitive in the current market environment.

- **MccOS with GUI:** Implementing a widely used operating system ensures compatibility with EDC's operational needs, enabling seamless integration into

the current workflow. The inclusion of a graphical user interface (GUI) will significantly improve user interaction, making the system more accessible and easy to use. This meets user expectations because many contemporary users are familiar with GUI-based systems. Moreover, offering a recognizable interface minimizes the adaptation period for new users and promotes quicker system adoption.

- **CPU Upgrade to 68000:** The shift to 68000 CPU is crucial for boosting processing capabilities. This upgrade will enable Synputer to handle more resource-intensive applications and provide users with a more responsive experience. As software complexity increases, a powerful CPU is critical for maintaining performance levels. By investing in a more capable processor, we prepare Synputer to meet future software demands, which is particularly crucial as applications continue to evolve.
- **Increased Memory:** Expanding from 128 KB to 512 KB RAM is vital for accommodating modern applications and multitasking functions. This increase will allow users to operate multiple applications concurrently without performance issues, which are crucial in both personal and professional settings. In today's computing environment, where multitasking is common, sufficient memory ensures that the system can deliver a smooth user experience, even under heavy usage.
- **Removable Media Options:** Incorporating SCSI or floppy drive options enables interoperability with current industry-standard platforms, enhances usability, and facilitates easy data access and transfer. This functionality also addresses the requirements of organizations that may require compatibility with legacy

systems. By offering these storage alternatives, we can improve the adaptability of the system and ensure its smooth integration into existing work processes.

- **External Keyboard Connector:** This feature boosts accessibility and adaptability, especially for users in various regions who may favor different keyboard layouts. By including a port for external keyboards, we enable customization and flexibility to suit the diverse user preferences. This enhances user comfort and expands the potential market by accommodating a wide range of user needs.
- **Expansion Capabilities:** Offering additional ports for expansion ensures that the system remains flexible and prepared for future advancements, allowing users to connect to new peripherals as technology progresses. This capability will position Synputer as a versatile solution capable of evolving with user requirements. As consumers invest in new technologies, their ability to upgrade and expand their systems serves as a crucial selling point.

Project Timeline Overview

Let us now examine the Project Timeline and Sprint Overview.

We structured the project into distinct phases with specific deliverables to ensure efficient resource management and to maintain a focus on key objectives.

Project Timeline:

- Design finalization and prototype updates: 4 weeks.
- Hardware Testing and Integration: 6 weeks.
- Software porting and application development completion: 10 weeks.
- User Acceptance Testing: 2 weeks.
- Full-scale production of modified Synputers: 6 weeks.

Sprint Breakdown

- Sprint 1: Emphasis on hardware modifications, including CPU upgrades and memory expansion, to align all hardware components with new specifications.
- Sprint 2: Focus on software porting and MccOS integration with GUI capabilities, initiating the development of a user-friendly interface.
- Sprint 3: Dedicated to system integration and thorough testing to ensure robust performance across various applications.

This methodical approach enables quick adaptation to changes, while maintaining a clear focus on deliverables. Regular evaluations at each stage will help to identify potential obstacles early, allowing for prompt intervention.

We ensured team alignment and consistent progress towards our objectives by dividing the project into manageable sprints. Each sprint concludes with a review session to assess outcomes and to adjust strategies as necessary to keep the project on course.

Budget and Cost Analysis

Let us now review our Budget and Cost Analysis.

We conducted a comprehensive evaluation of our expenses to ensure that we could deliver the necessary upgrades while maintaining the previously advertised price of £399.99.

Price Considerations:

- Synputer's current base price was set at £399.99. With our estimated total cost of £480,000, we need to carefully manage our production expenses to ensure profitability.

- We will investigate cost-saving methods, such as negotiating bulk purchase agreements with vendors and streamlining engineering processes to reduce unnecessary spending.

To meet EDC requirements and satisfy our existing customers' needs, we identified two potential approaches:

1. Dual System Approach: This involves creating one system customized for EDC and another for the broader market. This strategy ensures that the EDC's specific needs are addressed while still serving the general consumer demand. This allows us to develop a tailored solution that specifically caters to EDC's business operations and requirements.
2. Unified Model Approach: Alternatively, we can develop a single system that is marketed differently to various audiences. This approach involves maintaining core specifications that satisfy both parties' needs while simplifying production processes. This enables us to take advantage of economies of scale, potentially reducing costs and improving our overall competitive position.

Furthermore, expenses must be monitored throughout the development process. Implementing a comprehensive financial tracking system will enable us to remain informed about our expenditures and modify our strategies as needed.

Proposed Solutions for EDC & Market Demands

Let us examine our Suggested Resolutions for EDC & Market Requirements.

Tackling EDC's Needs:

To effectively resolve EDC issues and meet their demands, we recommend the following.

- An enhanced Synputer version featuring industry standard specifications and comprehensive software compatibility. This encompasses the required CPU enhancement, expanded RAM, and contemporary OS with a GUI. By fulfilling these criteria, we guarantee a system that is both functional and user-friendly, facilitating easier adoption by the EDC staff.
- We will maintain support for current users by ensuring backward compatibility with legacy applications via the SynEM emulator, thus safeguarding prior system investments. This capability is crucial for enterprises that rely on older software, enabling them to upgrade hardware without losing access to vital applications.

Addressing Market Needs

To meet broader market demands, our approach includes the following steps:

- Keeping the base model competitive while offering extra features as optional add-ons. This adaptability serves a diverse user base, from casual consumers to demanding business clients. Implementing a tiered product structure can appeal to various market segments and boost customer satisfaction.
- Capitalizing a brand's reputation for quality and performance is vital. By underscoring our dedication to user satisfaction and product excellence, we can retain existing customers and attract new customers. Our marketing strategy emphasizes improved features and performance upgrades, demonstrating how the new Synputer distinguishes itself from rivals.

Additionally, market research will help identify emerging trends and user preferences, allowing us to tailor our product offerings more effectively. Engaging customers through surveys and feedback sessions will enable us to refine marketing strategies and product development efforts.

Risk Management and Challenges

Let us now examine Risk Management and Challenges.

1. Production Delays:

- **Impact:** High postponements can result in delayed product launches and potentially diminish market interests.
- **Mitigation Strategy:** We will adopt a concurrent development approach, enabling hardware testing to occur alongside software development. This method substantially decreases the overall time required to introduce a product into the market. We also locate backup suppliers for crucial components to reduce delays caused by supply chain issues. Developing a schedule with incorporated buffer periods for each stage would assist in managing unexpected setbacks.

2. Cost Overruns:

- **Impact:** Medium budget excesses can jeopardize profitability and may necessitate retail price increases, potentially affecting demand.
- **Mitigation Strategy:** A comprehensive cost evaluation is performed at the beginning of each project phase to ensure that expenditures align with the budget. Additionally, we negotiate volume purchase agreements for essential components in order to obtain lower prices and decrease overall expenses. Conducting regular budget reviews will keep us informed about spending and allow for strategy adjustments, as necessary.

3. System Stability:

- **Impact:** High instability may lead to performance problems, resulting in user dissatisfaction and possible damage to brand reputation.

- **Mitigation Strategy:** We allocate resources for extensive testing phases, including unit tests, integration tests, and user acceptance testing (UAT), to detect any issues early in the development cycle. Working closely with hardware and software engineers to examine and address EM interference issues is crucial to achieve a stable product. Establishing a dedicated QA team will enhance the testing capabilities and ensure a robust final product.

4. Market Shift to GUI Systems.

- **Impact:** Medium – failure to adapt could make the product obsolete and less competitive.
- **Mitigation Strategy:** We focus on developing a user-friendly GUI that meets contemporary user expectations. We will also conduct market research to gain a better understanding of user preferences and adjust the development accordingly. Involving early adopters and stakeholders during the development process provides valuable inputs to inform design decisions.

User Acceptance Testing and Deployment

We now examine our strategies for User Acceptance Testing and its Final Implementation.

User Acceptance Testing Strategies:

- **Timeframe:** A two-week period was allocated for comprehensive testing and gathering feedback from the EDC and other key stakeholders.
- **Key Areas:** The User Acceptance Testing evaluates system efficiency, reliability, integration with current software, and overall user satisfaction. By

concentrating on these aspects, we can verify that the product not only meets technical requirements, but also fulfills user needs. Our aim was to establish a thorough testing environment that simulates real-world usage conditions to obtain relevant inputs.

- Feedback Incorporation: Issues detected during UAT will be swiftly resolved before moving to full-scale production. This stage is crucial, as it enables us to confirm our improvements and ensure that they meet user expectations.

Implementation Schedule

After User Acceptance Testing completion, we will initiate the manufacturing phase, enabling us to deliver the enhanced Synputer model to customers, as planned. The schedule is as follows:

- The system redesign was completed in February 1984.
- Start the full-scale production of modified units in March 1984.
- Execute User Acceptance Testing in April 1984.
- The upgraded model was introduced in June, 1984.

This organized timeline will assist in maintaining progress while ensuring that all necessary improvements are implemented. It is crucial to keep all stakeholders informed throughout this process to uphold transparency and effectively manage expectations.

Conclusion and Next Steps

In summary, we have determined the essential adjustments to the Synputer system that will fulfill the EDC's specifications and broader market needs while maintaining our advertised \$399.99 price point.

Action Plan:

The steps are outlined as follows:

- Finalize the system redesign in February 1984.
- Initiate full-scale production of the updated units by March 1984.
- Execute User Acceptance Testing (UAT) in April 1984.
- An enhanced model was introduced in June 1984.

We are optimistic that these modifications will not only meet stakeholder expectations, but also strengthen our position in the competitive computing market. Thank you for your time and we are ready to address any questions you might have.