

Development Individual Project - Transcript

Note: Sentence in [brackets] not for speaking

[Slide 1: Opening]

Good morning, everyone. Thank you for attending this presentation on the Synputer Project. I am the project manager of this project.

Synputer project is crucial for both Synful Computing and our valued partner, EDC. As we progress, we have encountered challenges and identified necessary amendments to ensure the Synputer meets both the original specifications and the evolving demands of our stakeholders, including EDC and our marketing team. Our goal is to achieve this while staying within a reasonable budget and schedule.

[Slide 2: Agenda]

Let me outline today's agenda for our presentation:

1. Reviewing the milestones we have achieved, and the progress made so far.
 2. Discussing feedback from EDC and the identified challenges.
 3. Proposing system changes to address these concerns and market demands.
 4. Presenting the finalised plan, budget, and timeline for implementing these changes.
 5. Outlining our updated marketing strategy to align with the new plan.
 6. Last but not least, discussing the next steps for the project.
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[Slide 3: Milestones and Current Status]

Let's start by reviewing the major milestones achieved in the Synputer project:

1. EDC contracted Synful Computing to develop a computer for both personal and business use. The Synputer Project officially began in **Q4 1982**.
2. The initial design was completed in **Q1 1983**, featuring a 68008 CPU, 128KB of RAM, custom cartridge storage, basic sound, a custom video port, and a desktop case with an internal keyboard. All components were soldered directly onto the board, with no socketed parts. The first prototype was developed based on this design.
3. In **Q4 1983**, initial production commenced based on the original specification. Our marketing team promoted the system at a price point of £399.99, and we received 3,000 pre-orders.
4. An evaluation unit was sent to EDC for feedback in **Q1 1984**. EDC raised several concerns regarding the system's specifications, which we will discuss next.

Currently, the first 1,000 units are already in production.

[Slide 4: Challenges and EDC's Complaints]

During the project, we faced several challenges across different areas:

1. **[Storage System:]** Our engineering department couldn't produce a solid-state storage solution, leading us to adopt Synful's internal cartridge system, which doesn't meet industry standards.

2. **[Design Shift:]** We shifted focus from a portable form factor to a desktop unit with a built-in keyboard due to production constraints and cost considerations, affecting market appeal.
3. **[Technical Issues:]** EM interference, from the floppy or cartridge drive motors caused system instability and reliability concerns.
4. **[Software Limitations:]** The HBConv application, designed to convert existing EB programs for use on the Synputer, successfully converted only about 60% of programs.
5. **[Marketing Requirements:]** Marketing research indicated that users expected more advanced graphics, better sound quality, and a GUI-based operating system, features our current system doesn't fully provide.

[EDC's feedback]

In February 1984, EDC provided detailed feedback highlighting several shortcomings affecting the Synputer's suitability for professional use:

1. **Lack of an Industry-Standard Operating System:** EDC requires a stable, widely adopted OS for compatibility and ease of use.
2. **[Absence of an External Keyboard:]** The built-in keyboard doesn't meet EDC's requirements and limits workstation flexibility.
3. **[Insufficient Memory:]** The current RAM capacity is inadequate, hindering performance for demanding applications.
4. **[Non-Standard Removable Media:]** The proprietary cartridge system doesn't align with industry-standard storage media, causing compatibility issues.

5. **[Lack of Expandability:]** The absence of expansion capabilities limits the system's utility in a professional environment.
6. **[Underpowered CPU:]** The 68008 CPU doesn't meet performance expectations, especially for future developments.
7. **[System Instability:]** Regular system crashes are unacceptable in a professional setting where reliability is critical.

To address EDC's concerns, we plan to update the requirements, aiming to ship the updated units to EDC by July 1984.

[Slide 5: Updated Requirement]

To address EDC's feedback and align with market demands, we've updated the Synputer specifications. Here is a summary of the key requirements and justifications for these changes:

1. **Industry-standard OS:** We will port CP/M-68K to the Synputer, providing EDC with a stable and widely recognized OS. Additionally, we'll offer MccOS as an optional upgrade for users seeking enhanced features.
2. **External keyboard and connector:** We will redesign the system to include a detachable keyboard, addressing both usability and enterprise preferences.
3. **512KB of RAM:** To support advanced applications and future-proof the system, we will increase the RAM to 512KB, meeting EDC's and market demands.
4. **Industry-standard removable media:** Alongside our cartridge system, we will integrate a 3.5-inch floppy drive, ensuring compatibility with widely used media formats.

5. **SCSI expansion capability:** We will add a SCSI port to allow for expandability, including support for external storage and peripheral devices.
6. **Upgrade CPU:** The CPU will be upgraded from the 68008 to the 68000, offering greater performance and an upgrade path for power users.
7. **GUI readiness:** We will make the system GUI-ready, supporting GEM graphical and PTR/E pointer environments, meeting the growing demand for GUI-based systems.
8. **Advanced graphics and sound:** The system will feature 512 colors at a resolution of 1024x768, along with 3-channel sound to meet gaming and multimedia demands.
9. **Stability improvements:** We will resolve the EM interference issues by redesigning the power supply and adding improved shielding to the components.
10. **EB Converter:** We propose a licensing deal with the vendor to supply EB for OS at a cost of £25 per machine to mitigate the challenge raised by the HBConv application.

Assuming there will be no conflict with the upgrade option of MccOS, these updated requirements reflect both EDC's needs and the expectations of the broader consumer market.

[Slide 6: Updated Plan and Budget]

To implement the updated requirements, we have developed a costed project plan for the modified Synputer system.

The table here details the components and their associated costs.

The total material cost is **£161** per machine.

Other key costs include:

1. **Software Development of PTR/E & GUI** - cost £20,000 for 16-week coding, 8-week design.
2. **Licensing Fees of EduPC** - £25 per machine.
3. **SCSI Expansion Board**: £15 per unit which is optional and not considered in the budget.

The total estimated budget for the first 2,000 units is **£599,385**, representing a 20% increase from the original budget.

[Financing the Budget Increase]

Despite the increase, we have strategies to cover the additional costs:

1. **[Pre-Orders:]** With 3,000 existing pre-orders and potential for more due to enhanced features, we can secure additional funding upfront.
2. **[Economies of Scale:]** By producing a unified system for both EDC and the general market, we can reduce per-unit costs.
3. **[Cost-Saving Measures:]** Streamlining production and negotiating for bulk discounts will help manage the budget.

We are confident that these financial adjustments are manageable and will result in a superior product that meets our stakeholders' expectations while ensuring profitability.

[Slide 7: Updated Timeline]

To implement the changes, we've adjusted our project timeline.

1. [Component Sourcing (Weeks 1–4):]

- During the first four weeks following approval, we'll source all necessary components, including the upgraded 68000 CPU, additional RAM modules, and the SCSI expansion boards.

2. [Prototype Development (Weeks 5–12):]

- Over the next eight weeks, we'll develop and assemble prototypes of the updated Synputer.
- These prototypes will incorporate all the new features, allowing us to test and refine the design.
- We'll conduct thorough prototype testing, unit and integration testing, and full system testing at various stages to identify and resolve any technical issues.

[(Beizer, 1984; Camburn et al., 2017; Hartman, 2005).]

3. [Testing and User Acceptance Testing (Weeks 13–16):]

- User acceptance testing will involve select customer from EDC and our consumer base to gather feedback.
- Feedback will be analyzed and incorporated into the final design where feasible.

4. [Full Production (Weeks 17–24):]

- Full-scale production will commence in June 1984, starting in Week 17.

5. [Delivery to EDC (July 1984):]

- 2,000 units will be delivered to EDC by July 1984, fulfilling our contractual obligations and addressing their urgent needs.

6. [Delivery to Pre-Order Customers (September 1984):]

- The 3,000 pre-ordered units will be delivered to our customers by September 1984.
- This timeline allows for any final adjustments post-EDC delivery and ensures we meet consumer expectations.

By continuing to use Agile Scrum methodology, carefully managing each sprint in the software development lifecycle, and maintaining open communication with our teams and stakeholders [(Nagl, 2023; Negi, 2019)], we aim to deliver a high-quality product within the revised schedule.

[Slide 8: Updated Marketing Strategy]

Given the different requirements from EDC and the existing user base, we have considered two options:

1. Create Two Separate Systems:

- Synputer Base Model focused on home users and hobbyists with minor upgrades.
- And,
- EDC Enterprise Model with higher-spec machine with 68000 CPU, 512KB RAM, external keyboard, and SCSI support.

Or,

2. [One Unified System:]

- A single system meeting both EDC's and consumer requirements, branded differently for each market segment.

After reviewing the costs and the complexity of managing two product lines, we recommend producing one unified system that meets the needs of both markets, with the benefits of:

1. **[Cost Savings:]** Economies of scale help reduce per-unit costs, as explained in the previous slide regarding budget, and
2. **[Simplified Production:]** Streamlines manufacturing and reduces logistical overheads.

Creating one unified system ensures we meet both EDC's enterprise needs and the broader consumer market's desire for a competitive home computing machine.

[Pricing Strategy]

Our goal is to remain competitive while ensuring profitability. We propose the following pricing:

1. **Standard Price:** Maintain at £399.99 for the consumer market.
2. **[Enterprise Package:]** Offer an enterprise package at a 10% premium, £439.99, including additional software licenses, extended support, and other enterprise-specific services.
3. **[Optional Upgrades:]** We also provide software and peripheral upgrades that customers can purchase based on their needs.

This pricing strategy allows us to meet both consumer and enterprise demands while maintaining profitability.

[Slide 9: Conclusion and Next Step]

We have outlined a comprehensive plan to address EDC's concerns and align the Synputer with current market demands. Next steps:

1. [Finalize the design and begin component sourcing]
 - We'll complete the final design adjustments promptly and initiate the sourcing of all necessary components.
2. [Develop prototypes and conduct UAT by May 1984]
 - Then develop prototypes with enhancements.
 - We'll conduct rigorous User Acceptance Testing, involving stakeholders from EDC and select consumer representatives.
3. [Commence Full Production (June 1984)]
 - We'll begin full-scale production in June 1984 to meet our delivery commitments.
 - Processes will be monitored closely to maintain quality and adhere to the timeline.

We are confident that the updated Synputer will meet the needs of both EDC and the consumer market. As our logo indicates, Synputer aims to provide a SUPER user experience.

[Slide 10: Closing and List of Reference]

That concludes our presentation for today. We've covered the current status of the Synputer project, the challenges we've faced, our proposed solutions, and the updated plan to move forward.

We will continue to monitor the project closely and remain committed to transparency and regular communication with all stakeholders. Your feedback and support are invaluable as we work to bring the Synputer to market successfully.

We're now open for any questions you may have, or if you prefer, you can also contact us after the meeting for any further inquiries.

Thank you all for your time and attention. We look forward to your continued partnership as we progress on this exciting journey.

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