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| Desktop Migration Proposal Tri Dai Ho  CMT 202 | A close up of a logo  Description automatically generated |

# Section 1: PC Purchase Research

After carefully researching the user requirements, the Dell XPS product line stands out the most from other business laptops. Supporting multiple displays indicates that HFA users will be running many different programs simultaneously. The Dell XPS 15, equipped with the 11th generation Intel i7 8 cores, 16 thread 4.60 GHz, can guarantee the desired performance speed while running multiple applications. This is a significant upgrade from the current Intel i5 Dual Core that the Creatives and Coders are using. With four times the number of cores and threads, multitasking will never feel effortless and undoubtedly contribute significantly to HFA’s productivity. Furthermore, the XPS 15 has a dedicated graphics processing unit (GPU) powered by NVIDIA GeForce RTX 3050 with 4 Gb DDR6 visual memory. This is the necessary upgrade for HPA’s elite users that has been long overdue. Applications such as Adobe Illustrator, CLO Enterprise Edition, and Apparel Magic Enterprise Edition require a more powerful machine than what the desktops are offering [1], [2], [3]. The NVIDIA GeForce RTX 3050 combined with 16 GB of DDR4 of memory and 512 Gb SSD will meet and surpass the minimum requirement of these hardware-intensive programs. Additionally, this graphic card will age well when the newer version of these programs gets released in the future. The XPS 15 has a 15 inches OLED touch screen that will satisfy our content creators with the liberty to use a stylus to express ideas and concepts. The upgrade from display resolution from HD+ to near 4K will allow the users to zoom/pan, rotates, load multiple layers, and render without scarifying neither speed nor quality. The XPS 15 offers two secure, personalized ways for login. Users can unlock the devices with either facial recognition or integrated fingerprint [4]. A 6-cell battery allows up to 9 hours and 13 minutes of streaming [4]. This laptop has 2 x Thunderbolt 4 ports, 1 USB 3.2 Gen 2, and 1 x 3.5mm audio port.

The XPS 13 is only 13 inches but can still support multiple displays in FHD via Thunderbolt 4 port. The 8 Gb of LPDDR4x RAM and 256 Gb SSD of the XPS 13 will significantly decrease hardware maintenance cost while still meeting the requirement for Common users. The XPS 13 processor is the 11th Generation Intel i5 4 cores, eight threads 4.20 GHz, which is two times more robust than the current desktops that HFA is using. It has the Intel Iris Xe to replace the older integrated Intel graphic for graphic processing. It also has a MicroSD card reader slot for extra storage if needed. The XPS 13 is a good balance laptop for everyday office work while allowing some capacity for high-quality graphical display. The XPS 13 can remain active for up to 14 hours, 11 minutes on batteries in Full HD+ []. This laptop has 2 x Thunderbolt 4 ports and 1 x 3.5mm audio port.

Both models are also equipped with Killer Wi-Fi 6 AX1650 2x2 and Bluetooth 5.1 compatible. This opens the ability for the users to connect wirelessly to the HFA network, which reduces both the maintenance cost and tripping hazard in the workplace. Bluetooth 5.1 allows more devices to connect to the laptops with less wire and open more workspace on their desk. Both XPS 15 and XPS 13 (for the Common User profile) utilize Thunderbolt 4 technology to transfer the image, audio, and power to the docking station. The Thunderbolt 4 port will allow a quick transition between laptop-mode and a desktop-like mode with this device. It will also free up the remaining USB 3.2 slot on the laptop to attach additional peripheral accessories. The docking station has 1 HDMI port, 2 DP ports, 1 USB-C, and 1 Thunderbolt, which can support up to 4 monitors in high DPI resolution (when using adapter cable).

# Section 2: PC Purchase Recommendation

**Common User profile**

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| **Current desktop** | **Laptop Recommendation** |
| **Processor**: Intel i3 Dual Core  **Memory:** 4 GB  **Graphic:** HD  **Storage:** 3.5” 7200 RPM 500 GB HDD | **Processor:** Intel i5 4 cores, 8 threads, up to 4.20 GHz  **Memory:** 8 GB, LPDDR4X  **Graphic:** LCD FHD (1920 x 1080) non-Touch display  **Storage:** 256 GB, M.2 PCle NVMe SSD  **Connectivity:** Wi-fi 6 AX 1650 (2x2), Bluetooth 5.1  **Battery:** 4 cells, 52 WHr  **Warranty:** 1 Year ProSupport with Next Business Day Onsite Service + Accidental Damage (drops, spills, surge).  **Support**: None  **Antivirus:** McAfee Small Business Security 12-month Subscription  **Accessories:** Dell Thunderbolt Dock- WD19TBS  Dell 24 Monitor  **Cost estimate per machine per user:** $1,345.98 as of 09:35 pm CET 16 February 2022 |

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| **Current desktop** | **Laptop Recommendation** |
| Processor: Intel i5 Dual Core  Memory: 8 GB  Graphic: HD+  Storage: 3.5” 7200 RPM 1 TB HDD | **Processor:** Intel i7 8 cores, 16 threads, up to 4.60 GHz  **Memory:** 2 x 8 GB, DDR4  **Graphic:** OLED 3.5K (3456 x 2160) Touch Anti-Reflective  **Storage:** 512 GB, M.2 Pcle NVMe SSD  **Connectivity:** Wi-fi 6 AX 1650 (2x2), Bluetooth 5.1  **Battery:** 6 cells, 86 WHr  **Warranty:** 1 Year ProSupport with Next Business Day Onsite Service + Accidental Damage (drops, spills, surge).  **Support**: None  **Antivirus:** McAfee Small Business Security 12-month Subscription  **Accessories:** Dell Thunderbolt Dock- WD19TBS  Dell UltraSharp 27 Monitor  **Cost estimate per machine per user:** $2,868.23 as of 09:35 pm CET 16 February 2022 |

**Creatives and Coder User profile**

Please review the attachments for a more detailed product specification.

**References**

[1] "Illustrator system requirement" *helpx.adobe.com*, Feb. 16, 2022. [Online]. Available: <https://helpx.adobe.com/illustrator/system-requirements.html>. [Accessed: Feb. 16, 2022].

[2] "Pricing” *clo3d.com*, 2021. [Online]. Available: <https://www.clo3d.com/pricing>. [Accessed: Feb. 16, 2022].

[3] Dell Technologies, "XPS 15 Laptop" *dell.com*, 2022. [Online]. Available: <https://www.dell.com/en-us/work/shop/laptops/new-xps-15/spd/xps-15-9510-laptop>. [Accessed: Feb. 16, 2022].

[4] Dell Technologies, "XPS 13 Laptop" *dell.com*, 2022. [Online]. Available <https://www.dell.com/en-us/work/shop/laptops/13-new/spd/xps-13-9310-laptop#carousel-example-with-caption> [Accessed: Feb. 16, 2022].