

**To:** Board of Directors

**Date:** August 31, 2018

**From:** Jim Brown, Director of Information Technology

**SUBJECT:** Amendment of 5-year IT Replacement Plan

### **Background:**

Currently, LINK utilizes Trapeze Pass to track passenger information, schedule rides and create efficient daily manifests. These hardcopy paper manifests are sent with each driver at the beginning of their route, which works well in a static manner that's devoid of problems or changes to the route. When cancellations, changes or problems occur, which happens multiple times per day, everything is handled manually by dispatch and relayed via radio. This is becoming increasingly inefficient and unmanageable.

Purchasing a real-time GPS and dynamic scheduling module with mobile tablets and incorporating that with our existing Trapeze Pass software would provide the following benefits:

- Real-time GPS view from dispatch of every LINK van location and status.
- Real-time dynamic manifest with turn-by-turn instructions for drivers.
- Logged arrival/departure times for every trip for quality assurance and maximizing efficiency.
- Automated dispatch allows dispatcher to insert trips where cancellations occur, making LINK more efficient with less radio calls to/from dispatch as well as improve on-time performance.
- Ability to later add Trapeze Web and IVR module, which would provide our passengers with real-time status of their ride, and scheduling/cancellations through Mobile, Web and Automated Telephony methods.

Staff would like to amend the existing 5-year IT Replacement Plan by adding a real-time GPS and dynamic scheduling module to improve on-time performance, productivity and provide staff with more accurate performance data.

### **Financial Implications:**

Staff has been in the process of evaluating a couple of real-time GPS and dynamic scheduling products and is currently anticipating a capital cost of less than \$200,000. Staff intends to cover \$140,000 of this cost by incorporating it into the upcoming procurement of 45 new vans—paid for by federal grant. It is important to note that such a product will also incur annual maintenance fees as well as expenses for cellular data. If the board approves an amendment to the 5-year IT Replacement Plan staff will bring a request to the board with actual capital and recurring costs.

## Inter Office Memo

### **Action Requested:**

Staff respectfully requests the 5-year IT spending plan be amended to include Real-Time GPS and Dynamic Dispatching.

### **Attachments:**

5-year IT Plan approved at May 2016 Board of Directors meeting—contains additional spending requests (in red) proposed in this memo.

To: Board of Directors

Date: May 5, 2016

From: J. Scott Mitchell  
Director of Maintenance

Reviewed by:

---

### **SUBJECT: 5 Year IT Replacement Plan**

---

**BACKGROUND:** As the Board of Directors is aware and has recognized, the need for up-to-date information and technology systems are critical. Information and technology systems are becoming more prevalent and a necessity in our daily lives. The need for up-to-date and robust information and technology infrastructure is critical for the efficient daily operations of County Connection. It is becoming more prevalent in every aspect of the operation.

**SUMMARY OF ISSUES:** County Connection needs to update and replace critical software, hardware, and facility systems over the next five (5) years.

#### **SOFTWARE:**

##### **PowerUp Replacement:**

PowerUp is a software that does driver payroll exception, accounts payable, accounts receivable, and general ledger. PowerUp is a software that was created and supported by one individual with a closed source code. Staff recommends that we replace PowerUp with custom software using DragonPoint. This custom software will function in the way County Connection operates; reducing training and the time for employees to become acquainted with it. But it will have an open source code that County Connection would own reducing support costs and enhancing our ability to customize it in the future.

COST: \$93,000

##### **Ops Module Replacement:**

The Ops module has been functioning in a small capacity in Dispatch, but has never provided the adequate functionality that was promised, nor does it integrate with other relevant software packages at County Connection. It is recommended that this be replaced with custom software using DragonPoint. DragonPoint understands our business process well and has provided other solutions for County Connection that can be integrated with the Ops module replacement. This new software will provide all the functions that the current system provides as well as others that have become necessary since the original implementation.

COST: \$80,000

##### **TAS - Full Integration:**

This is another proposed module that we would use DragonPoint for. This module would tie all existing software modules, including those listed above, together to create one cohesive platform. TAS stands for Time and Attendance System. Its basis is an integration between Operations and Payroll to report Exceptions to the ADP Payroll

System. It will also serve as a hub between CIMS (Maintenance and Inventory Control System), Trapeze (Scheduling), Ops (Transportation) and the PowerUp replacement (Transportation and Payroll General Ledger).

COST: \$95,000

**Windows Server Upgrade:**

This is a necessary upgrade to our server operating system. Current version will soon be at end of life and no longer supported by the manufacturer.

COST: \$36,000 (2017), \$50,000 (2020)

**SQL Database:**

This is a necessary upgrade to our database software. Current version at end of life soon and no longer supported by manufacturer.

COST: \$24,000 (2017), \$40,000 (2020)

**Trapeze FX:**

FX is our scheduling software used to create the run cuts and schedules. Although most upgrades to FX have been included in our annual maintenance contract, the next version requires an add-on module to allow Trapeze data to be exported to Clever Devices. County Connection cannot upgrade FX without this add-on module. The current version we are currently on will no longer be supported by Trapeze.

COST: \$140,000

Proposed Revision 09/2018:

**Real-Time GPS and Dynamic Dispatching:**

**Trapeze Pass is the LINK Scheduling software used to track passenger info, book rides and produce daily manifests. The proposed module and tablet package will enhance the existing software with real-time GPS updates, proper logging and metrics of on-time performance, dynamic dispatching, turn-by-turn navigation and dynamic manifests for drivers, and build a foundation for the future to add interactive web and mobile features for our passengers.**

COST: \$200,000 (2018)

**Microsoft Office:**

This is the replacement of the MS Office productivity system installed on most desktop personal computers. This occurs when current version will no longer be supported by Microsoft.

COST: \$14,000 (2017), \$15,000 (2019)

## **HARDWARE:**

### **Host Server:**

This is necessary to add to our virtualized network for planned software expansion moving forward.

\$23,000 (2017), \$25,000 (2019)

### **Back-up Replacement:**

This is a hardware software solution to replace our aging disaster recovery equipment.

\$25,000

### **Replace Desktop Personal Computers:**

All personal computer (PC) hardware is approaching end of life. Measures were taken in the past years to extend the current PCs as long as possible.

COST: \$64,000

## **NETWORKING HARDWARE:**

### **POE Upgrade:**

Power Over Ethernet (POE) upgrade is to provide distribution switches that will feed both power and network to devices at the desktops. Existing distribution switches that provide network access to PCs, Desk Phones, Badge Systems, Cameras, etc. need to be replaced. This proposes that POE switches be used in this next round to provide power to devices as well. This will eliminate the need for the current Power Infusers that tend to fail. Power is primarily used by the Shoretel phones and security equipment.

COST: \$70,000

### **Core Switch Upgrade:**

This is another networking equipment upgrade, but includes the Core Switches that connect to the Server, the Internet, and the distribution switches listed above. This is replaced on a 6-8 year cycle.

COST: \$90,000

### **WiFi Upgrade:**

This is part of another 6-8 year replacement cycle. WiFi is necessary for both portable devices within the buildings, as well as, connection to buses in the yard for Clever Devices and Clipper data feeds.

COST: \$40,000

**TELECOMM:**

**Phone System Replacement:**

This is the replacement of County Connection's telecomm equipment, from the PBX and Voicemail to each individual desk phone. This has a 10 year replacement cycle.

COST: \$120,000

**Call Recorder:**

The Call Recorder records calls in Customer Service, LINK and Dispatch. This will need to be replaced in conjunction with the above Phone System. If this can be combined with the Radio Recorder listed below, in one system, then both should be replaced a year sooner. A combined system would be more efficient and economical.

COST: \$30,000

**Radio Recorder:**

The Radio Recorder records radio conversation between Dispatch and the buses. Current version requires very outdated software that won't run on newer desktop PCs.

COST: \$30,000

**FACILITY:**

**Conference Room Equipment:**

This includes all Audio/Video equipment in the Boardroom, Conference Rooms and the Training Room. This upgrade will set the standard for equipment and its replacement cycle.

COST: \$35,000

**Badge Security System:**

Not a full replacement. Includes upgrades to main hub hardware that will be end-of-life and technology upgrades to software to provide further functionality.

COST: \$80,000

**Video Surveillance:**

This is a replacement of the multiple existing video surveillance systems to a modern unified system with central storage and multiple logins with individualized security. This will establish a 7-year replacement cycle.

COST: \$150,000

Board of Directors  
May 5, 2016  
Page 5

FINANCIAL IMPLICATIONS: \$1,369,000 (+ \$200,000 for 09/2018 Proposal above) over five (5) years. \$700,000 has already been approved and included in the FY14, 15, 16 Capital Replacement Budget. \$150,000 is included in the proposed FY17 Capital Plan. (Please see attached spreadsheet.)

OPTIONS:

OPTION 1: Proceed with Plan as proposed.

OPTION 2: Modify proposed Plan to include or exclude some components.

OPTION 3: Choose not to move forward with proposed Plan.

RECOMMENDATIONS:

The A&F Committee recommends that the Board of Directors at its May 19, 2016 meeting, approve adoption of a 5 Year IT Replacement Plan.

Attachment

5 Year IT Plan

	2016	2017	2018	2019	2020
<b>Server Software</b>					
PowerUp Replacement	\$93,000.00				
Ops Module Replacement	\$80,000.00				
TAS Full Integration	\$95,000.00				
Windows Server Upgrade		\$36,000.00			\$50,000.00
SQL Database Upgrade		\$24,000.00			\$40,000.00
Trapeze FX Upgrade		\$140,000.00			
Trapeze DriverMate Module				\$200,000.00	
<b>Server Hardware</b>					
Host Server		\$23,000.00		\$25,000.00	
Back-up Server		\$25,000.00			
<b>Desktop Software</b>					
Microsoft Office		\$14,000.00		\$15,000.00	
<b>Desktop Hardware</b>					
Replacement Desktop PCs		\$64,000.00			
<b>Networking Hardware</b>					
POE Upgrade			\$70,000.00		
Core Switch Upgrade				\$90,000.00	
Wifi Upgrade					\$40,000.00
On-Board Cellular Routers				\$155,000.00	
<b>Telecomm</b>					
Phone Sys Replacement			\$120,000.00		
Call Recorder			\$30,000.00		
Radio Recorder		\$30,000.00			
<b>Building</b>					
Conference Room Equip				\$35,000.00	
Badge Security Sys					\$80,000.00
Video Surveillance		\$150,000.00			
<b>Yearly Total</b>	\$268,000.00	\$506,000.00	<del>\$220,000.00</del> \$70,000.00	<del>\$165,000.00</del> \$520,000.00	\$210,000.00

\$120k + \$30k for FY18 Telecomm was not needed. New phone system was not acquired through capital purchase. Reallocated \$150k to FY19 for On-Board Cellular Routers. \$200k for Trapeze DriverMate Module is in approved FY19 capital budget.



**RESOLUTION NO. 2019 -07**

**BOARD OF DIRECTORS  
CENTRAL CONTRA COSTA TRANSIT AUTHORITY  
STATE OF CALIFORNIA**

\* \* \*

**AUTHORIZING AMENDMENT OF  
THE CCCTA 5 YEAR IT REPLACEMENT PLAN**

WHEREAS, the County of Contra Costa and the Cities of Clayton, Concord, the Town of Danville, Lafayette, Martinez, the Town of Moraga, Orinda, Pleasant Hill, San Ramon and Walnut Creek (hereinafter "Member Jurisdictions") have formed the Central Contra Costa Transit Authority ("CCCTA"), a joint exercise of powers agency created under California Government Code Section 6500 *et seq.*, for the joint exercise of certain powers to provide coordinated and integrated public transportation services within the area of its Member Jurisdictions;

WHEREAS, on May 19, 2016, the CCCTA Board of Directors adopted a CCCTA 5 Year IT Replacement Plan ("Plan");

WHEREAS, staff has suggested amending the Plan to include Real-Time GPS and Dynamic Dispatching at the estimated cost of \$200,000; and

WHEREAS, the Administration & Finance Committee and the General Manager recommend Board authorization of the amendment to the Plan.

NOW, THEREFORE, BE IT RESOLVED that the Central Contra Costa Transit Authority Board of Directors authorizes the aforementioned amendment to the 5 Year IT Replacement Plan.

Regularly passed and adopted this 20th day of September, 2018, by the following vote:

AYES:

NOES:

ABSTENTIONS:

ABSENT:

---

Sue Noack, Chair, Board of Directors

ATTEST:

---

Lathina Hill, Clerk to the Board