Recommendations

1. The recommendation is to **deny** this project charter due to insufficient planning, training, and support available at this time.

2. Customer noted this was a “LACOE” sponsored training and selected product on that basis. ITO held conference where several vendors were invited to demonstrate their products. TS did not endorse one product over the other and has no standard in place for this technology.

3. Customer is seeking Android tablets to function as programming device for robot. These hardware devices are not allowed as student user devices due to the inability to lock down the operating system in a secure way to meet LACOE standards.

4. Ample time to review product for use within LACOE environment was insufficient and it is not fully know, the impact of support and training that may be required for this project.

5. Customer also noted that “programming” of equipment would be done by non-technical staff. All equipment entering our school sites must be configured and secured (OS) by the technical team.

6. TS has staff with experience with robotics and programming and it is recommended in order to provide a better experience across LACOE school sites, that a single or limited set of products that work within the current LACOE infrastructure, support, and training environment get adopted for use across all sites. It will allow for staff movement without re-training, build expertise among school site staff and within all of Technology Services units. This will also assist in streamlining the procurement process and the expectations and outcomes for customers.

7. Recommendation is to form a subcommittee of the Software/Hardware standards committee to do an extensive search for the right product that fits within the educational goals for school sites, the security requirements of TS & Probation, and fiscally responsible by using resources that are already within the organization.
   - The subcommittee would be in charge of doing Reviews of all possible hardware, software, and training aspects of the product
   - Create criteria for the ultimate recommended hardware and software that will be adopted as the standard.
   - Receive training on products
   - Meet to discuss future changes as needed
   - Committee recommended make up: DSP Admins, School Site teachers, Principals, TIS, ITO.
Project Charter

Los Angeles County Office of Education

Project Name: McAuliffe Android Tablet Controlled Drone project
Project Initiator: Troy Doyle
Functional Manager: None
Project Manager: Dr. Rondale Cooper
Priority: X High

This document should be completed and presented to administration for approval. It is an executive overview intended to facilitate discussion, and to provide formal authorization to proceed. This entire document should require between two and four pages when complete. It is not a detailed planning document. Information will likely be limited in terms of reliability and completeness. Budgeting and scheduling information is preliminary in nature and will be determined in the planning phase.

Problem or Purpose Statement

Describe in one or two sentences the overall problem the project is trying to solve or the purpose of the project. Be sure to identify the problem to be solved. This should not be a simple list of things to do or deliverables to be produced. Focus on why this needs to be done and what will be accomplished.

McAuliffe PAU is a LACOE certified, Road to Success Academy (RTSA). As such, McAuliffe must provide a thematic, interdisciplinary, project-based curriculum for its students. This requires that projects be designed that help to assess student learning and increase student engagement. The proposed acquisition of android tablets to control drones are a necessary part of a project in McAuliffe’s RTSA curriculum. McAuliffe intends to purchase programmable drone spheres which will be controlled by an application on a tablet. Therefore, McAuliffe must acquire tablets for this project. The acquisition of the tablets is the subject of this Project Charter and the only part which needs approval.

Educational Justification and Benefits

Describe how this affects student learning and/or achievement. Justification might include the desire for reduced costs, increased productivity, or conformance to regulations.

Through this project, students will gain experience with programming and problem solving using a programmable sphere drone. In order to use the drone, tablets must be acquired which will control the drones through a Bluetooth enabled application running on the android-based tablet. Students will benefit from learning how to operate a programmable, mechanical device. Generally, the study of robotics involves an understanding of science, math and engineering concepts which students will learn. Additionally, there is a clear need in the future for people who are skilled in the operation of programmable mechanical devices. Finally, the use of these drones will engage students in the task of programming in a way that is more concrete and tangible than traditional programming tasks on a computer.

Key Objectives

Describe the most important objectives (schedule, quality, financial, technical, educational, etc.).

Commented [M1]: Previously submitted REQ68237 was denied as it was only for Android Tablets which are not supported.
Commented [M2]: Technology Services requires all Technology to be previewed and tested within LACOE prior to allowing purchase. We would recommend we setup a DEMO of the product ASAP as part of this charter.
Commented [M3]: We do not have any mechanisms implemented to secure these devices and due to Play Store access will require at least 1 Generic Google GMAIL account.
Commented [M4]: Need to identify the product, some say they are flying drones, some describe as sphere type drone on floor. If an example of link to product would be helpful in determining support and options.
Commented [M5]: Purchase for “Drones” has not been made, but should be coordinated with Technology Services prior to submittal. As part of this charter, if approved, the robotic product would be identified and approved as a one time purchase in coordination with this charter.
Commented [M6]: 84 Tablets seem a high quantity for implementation, based on enrollment.
Commented [M7]: Any project involving any Drones should be introduced to Probation Facilities for any concerns or issues with the project. Approval from Probation in writing required.
Commented [M8]: Device should allow to lock connection settings if possible, this may need to be reviewed or an option for a hardwire tether would be preferable.
Commented [M9]: How many teachers and which ones? Is there any expertise or skills with current staff on this process.
Commented [M10]: While this can be used as a intro to programming to engage, the ultimate goal should include programming on a computer, which is what industry jobs require. Programming for Apps is possible, but usually done on virtual platforms running on computer.
The educational objectives are as stated above with respect to the RTSA requirements and the benefits of learning to program the drones. The project objective is to acquire, in the most cost effective way possible, the means for the students to control the drones. The android tablets that McAuliffe proposes to purchase are one-seventh of the costs of an Apple iPad and will be solely for the use of controlling the drones.

General Strategy
Describe in no more than three or four paragraphs the overall approach (not specific tactics or activities) for achieving project objectives. Potential topics: whether the deliverables will be implemented in phases; whether contractors / subcontractors will be used; whether a “pilot project” or prototypes will be used.

The strategy is a simple purchase of technology necessary for student control of the drone spheres. After researching options, McAuliffe’s School Site Council determined that an inexpensive option for accomplishing the goal of controlling the drones is to purchase the android-based tablets at issue here.

Initial Milestone Schedule
Note that this is not a detailed schedule. List the expected (or required) dates for key events. Examples could include the project start and end dates, phase end dates, completion of major deliverables, etc. Enter either estimated hours and/or date. Rule of thumb: more than six or seven milestones is probably too detailed for a charter.

McAuliffe Pau will utilize its Title 1 funds for the 2017-18 school year to purchase the android tablets. The tablets will be purchased as soon as the approval is given for the purchase. Given that we are already past the deadline for submitting purchase requisitions for the current school year (deadline was March 15, 2018), McAuliffe is seeking an immediate approval of this desired purchase in order to obtain the tablets this year. Once the tablets are purchased, they will be set up by school staff and put to use by students this school year. The tablets and accompanying drones will be used yearly by the students as part of the RTSA curriculum.

Financial Estimates
Identify the estimated cost of the overall project or the next phase. This is likely to be an order of magnitude estimate in the early planning phase, as compared to a firm (budget) estimate. Financial estimates should be within 25% of actual. These costs could include anything that requires a Purchase Requisition such as external training, consultants, travel, stipends, etc.

The overall cost will be approximately $50 per unit plus tax and shipping for a total of 84 units. Therefore, the project will cost approximately $5,000.00. The purchase requisition for the tablets has already been completed by the site and awaits approval from Johan Madrigal.

Resources
List all necessary internal resources – equipment, departments, software and people. This should be broken out by functional teams (i.e.: financial programmer, Operations, Networking group, desktop support).

Commented [M11]: A list of Apps should be included. Any other requirements besides Bluetooth. Devices will be locked and secured prior to delivery to school site.

Commented [M12]: Which robots were researched to review specifications and options for programming.

Commented [M13]: This is Title I deadline, not LACOE deadline of 4/20/18, but a decision is still needed ASAP.

Commented [M14]: All equipment and management is done by Technology Services. Teachers and/or Staff can give their requirements, but Technology Services ensure security integrity. At McAuliffe, there is a tech almost daily and needed changes would be handled quickly.

Commented [M15]: Implementation plan required. Any training or are there staff experienced? How many teachers, few or all will use the equipment?

Commented [M16]: This model, while fitting the cost, may not fit the technical standards required by Technology Services, a review of the equipment would be needed.

Commented [M17]: Pending approval from Senior Management, if approved would have site re-submit REQ.
**Project Charter**

McAuliffe will require no internal support from LACOE beyond its own school staff who will maintain the tablets including any system setup, establishing Bluetooth connections to drones, troubleshooting, etc.

<table>
<thead>
<tr>
<th>Initial Assumptions</th>
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</thead>
<tbody>
<tr>
<td>Identify any high-level assumptions that may be relevant to understanding this document. Assumptions might address the availability of funding, resources, or new technologies, expected growth in enrollment, etc.</td>
</tr>
</tbody>
</table>

There are no assumptions that are not already explicitly included in this document that are relevant to the understanding of the document or the project referenced herein.

<table>
<thead>
<tr>
<th>Initial Constraints</th>
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<tbody>
<tr>
<td>Identify anything that significantly limits the project team’s options in planning and executing project activities. These might include applicable laws and regulations, mandated target dates, financial limitations, resource limitations, etc.</td>
</tr>
</tbody>
</table>

The most significant constraint is the deadline for submission of purchase requisitions for this school year which has already passed (March 165, 2018). The Title 1 office has extended the deadline for submission by McAuliffe. However, in light of the fact that we are well past the deadline, McAuliffe needs immediate approval of this project in order to achieve the objective of acquiring the drones and tablets this school year.

<table>
<thead>
<tr>
<th>Major Risks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify significant risk events (high-probability and/or high estimated impact) that are relevant in terms of authorizing this project or upcoming planning activities. Be sure to include the risk of not doing the project.</td>
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</tbody>
</table>

If this android tablet purchase is not approved there is a high risk that McAuliffe will end up not being able to do the planned programmable drone project this year. Additionally, since the purchase of the programmable drones has already been approved, the failure to purchase the tablets could mean that the drones would sit unused for at least a year (if not longer) as there would be no way for the students to control them. The potential loss would be a squandering of public funds in the amount of approximately $19,000 for a purchase of drones that could go unused.

<table>
<thead>
<tr>
<th>Out of Scope</th>
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<tbody>
<tr>
<td>Identify specific related items that will not be included in this project (training, products, documentation, software features, and upgrades).</td>
</tr>
</tbody>
</table>

There will be no trainings included in this project for the operation of the tablets or the use of the application that controls the drones. McAuliffe site staff will be responsible for making sure that all necessary educational staff who will be working with students on the project will be trained in the use of the tablets, the application and the drones.

<table>
<thead>
<tr>
<th>Stakeholders</th>
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<tbody>
<tr>
<td>Please list all stakeholders and their interest in this project.</td>
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</table>

McAuliffe students – to be engaged in highly interesting and intellectually challenging activities through the use of current technology.

McAuliffe teachers and staff – to be able to deliver the entire RTSA curriculum as

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Comments:

- **[M18]**: This has to be reviewed, while teachers may be able to do this, they are not able to properly secure devices to LACOE Tech Standards and Requirements.
- **[M19]**: Title I or DSP deadline, LACOE wide deadline is 4/20/18
- **[M20]**: What model Drone is this? There may be different options available.
- **[M21]**: Seems there maybe some SME staff already onsite, is there any training materials that can be shared with TS?
designed by them.
Title 1 Coordinator and staff – need to be able to close out the purchases for the 2017-18 school year and are waiting for the approval of the requisition.

**Completion Criteria**
*Please list the items/events that will signify that this project is complete.*

Project will be complete when the purchase requisition is approved and the tablets are delivered to McAuliffe PAU.

**Ongoing Support**
*Please list all those that have a role in ongoing support after project completion.*

McAuliffe administrative team and any designated teachers and support staff will be responsible for the safe storage and maintenance of the tablets to assure the use of the tablets by students in the future.

**Conditions For Approval**
*This section should identify any conditions that are required BEFORE the project can go forward, assuming all approvals are obtained. Examples might be, the project is conditional upon finishing project xyz, or conditional upon obtaining 1 FTE to assist with the additional support requirements, or conditional upon obtaining the funding for the project, or conditional upon acceptance of reduction of support in other areas (areas to be identified).*

The only other condition that existed was the purchase of the drones themselves and the purchase requisition for the drones has already been submitted and approved by McAuliffe administration. There is no indication at this point that the drone purchase will not be approved.

Commented [M22]: I haven’t seen this REQ in the TS Queue and Purchasing has not received it as of 4/13/18
## Approvals

Minimally, this document should be signed by the Project Initiator, Functional Managers and Director. It may be advisable to include providers of key resources (lead technical staff, for example) and/or key stakeholders.

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Attachments:
#1 The Project Charter was completed to address this issue

#2 LACOE held Demo for the Spheres earlier this year for all the PAUs suggesting that we get these in our camps right away. The only difference is that they down loaded the apps to run the drones on personal phones, not the tablets we are requesting.

#3 We will have one teacher use a generic Google account to load the application from the play store then remove that account.

#4 They are not flying drones they are sphere type drones. www.sphero.edu is their web site. These drone are just like the ones that were demonstrated at the LACOE training. We chose these because they are not flying drones that would create serious probation safety issues.

#5 We were under the impression that the requisition for the drones was already approved and yes it will be a one time purchase because we plan on storing them after the Unit Theme is complete.

#6 There are 84 drones 7 cases of twelve. We have 7 math and science classes and we have 150 students that’s why we ordered 84 one per sphere.

#7 We have not obtained an approval from probation we assumed since LACOE held a demonstration for the drones that they were already approved through LACOE. We can submit if LACOE has not already.

#8 Not sure what this statement means, but the drones come in a case that can be locked with a pad lock and we have computer carts that can house the tablets that lock up as well. The tablets will not have Internet access, hard wire is impossible they will only be used to connect to drones using downloaded app.

#9 We have 7 math and science teachers and one of them went to LACOE’s training and will train our school staff.

#10 This is an intro level activity and device to engage the students towards wanting to proceed with a career in programming. We submitted documents showing the standards and goals along with the original REQ. Again LACOE promoted this for our students.

Page 2

#1 Sphero App and Blue tooth is all that will be on the tablets

#2 A full description and part number was included in the REQ for both tablets and drones

#3 We decided we wanted them and ordered them and are waiting for approval from LACOE

#4 We can have a teacher assist our school daily tech support here on site to set up tablets and drones

#5 Two staff have been trained and seven will use the product and will be trained by the two staff that went to LACOE’s provided seminar.

#6 The Sphero is the same product that LACOE displayed for our teachers. The only difference is they had our staff use their own phones which is not an option so that is why we are ordering the tablets.
#7 We look forward to resubmitting REQ after further review from Senior Management because LACOE previewed this item to our teachers earlier in the year.

Page 3

#1 This is a repeated statement

#2 We were provided an extension from Mr. Christophi

#3 We submitted drone proposal with model number on original drone REQ

#4 We will inquire, and at this time would ask Technical Services at LACOE what kind of information they have in place that covers the technical training they supplied our teachers about the drone Spheros.

# I am not sure what REQ you are referring to, but we submitted both REQ, one for tablets and one for Spheros.
Requisition

Deliver: CHRISTA MCAULIFFE PAU
5300 W AVENUE I
LANCASTER, CA 93536

Requestor: Galan, Joyce
Phone: 661-940-4201
Buyer: Choi, Michael - LACOE

VENDOR: 0000035372 - NEW VENDOR

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<th>Description</th>
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<th>UOM</th>
<th>Price</th>
<th>Extended Amt</th>
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<td>1 - 1</td>
<td>RCA VOYAGER PRO CHARCOAL TABLET 7&quot; TOUCH SCREEN 1.2 GHZ QUAD-CORE PROCESSOR 16 GB OF STORAGE MEMORY GOOGLE ANDROID 6.0</td>
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<td>49.980</td>
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Total Requisition Amount: 4,198.32

Header Comment: NEW VENDOR: WAL-MART.COM PLEASE INCLUDE TAX: $346.36 AND DELIVERY: $378.02

***** END OF REQUISITION *****
# Requisition

**Header Comment:**
NEW VENDOR: SPHERO 4772 WALNUT STREET SUITE 206 BOULDER COLORADO 80301 303-940-4201 PLEASE INCLUDE SALES TAX $1039.49 DELIVERY IS FREE RATIONALE: LEA GOAL ONE: STUDENTS WILL REACH COMMON CORE STATE STANDARDS AT A MINIMUM ATTAINING STANDARD MET AND/OR STANDARD EXCEEDED IN THE AREA OF ENGLISH/LANGUAGE ARTS AND MATH ON THE CAASPP. DRONES WILL BE USED AS A PROJECT IN THE RTSA CURRICULUM WHICH IS A COMMON CORE BASED PBL CURRICULUM. DRONES WILL ENHANCE STUDENTS SEQUENTIAL LOGICAL THINKING WHICH WILL IMPROVE MATHEMATICAL REASONING.

****** END OF REQUISITION *****

## VENDOR: 0000035372 - NEW VENDOR

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<th>Extended Amt</th>
<th>Due Date</th>
</tr>
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<tbody>
<tr>
<td>1 - 1</td>
<td>Sphero PP01RW1-SPRK = Power Pack</td>
<td>7.00 EA</td>
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**Total Requisition Amount:**
12,599.93

**MULTIPLE Account Summary:**

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<th>Price</th>
<th>Extended Amt</th>
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**Print Date:** 04/18/2018

**Business Unit:** 10199

**Req ID:** 0000068397

**Date:** 04/02/2018

**Page:** 1

**Requestor:** Galan, Joyce

**Phone:** 661-940-4201

**Buyer:** Choi, Michael - LACOE

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**Deliver:** CHRISTA MCAULIFFE PAU 5300 W AVENUE I LANCASTER, CA 93536

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