



Firearms Training Simulator
Cost Justification Documentation

dartrange.com

Contents

- Problem Statement..... 2
- Project Description 3
- Project Objectives 6
- Timeline/Activities 8
- Participating Agencies/Collaboration 9
- Budget..... 10
- Sole Source Discussion..... 11

Problem Statement

“There is no branch of public service where a man is so dependent upon his own initiative and resources as in the police department. When the police officer is sent out on patrol, he must be ready to meet practically any situation at a moment's notice”.¹

The U.S. Supreme Court phrased it like this, “police officers are often forced to make split second judgments in circumstances that are tense, uncertain, and rapidly evolving.”²

Imagine running *towards* an active shooter incident while everyone else is running away. We expect police officers to respond accurately, quickly, and efficiently to potential threats. What are the consequences if they do not? This question leads us to closely examine the firearms training we provide to our officers.

In a perfect world, we would provide our law enforcement officers with monthly, weekly or even daily firearms training. We would have the resources to offer remedial training to officers who are lacking confidence and skills, and work with them to improve rather than conducting a probationary release. The reality, however, is starkly different. Limited access to a live shooting range, budgetary constraints on ammunition, and paying officers overtime to attend training or cover shifts, prevent us from providing as much training time as the job demands.

This lack of training is a serious issue for the law enforcement officer, the community, and for potential victims of crime. In addition, the courts view cities that fail to provide adequate training as “deliberately indifferent” to the need for more training on the use of deadly force.³

Research has shown that in order to be able to react appropriately in an active shooter situation, it is necessary to participate in repetitive firearms training. Yet, most police departments only train about two times a year, averaging less than 15 hours annually.⁴ This is not an acceptable amount of training for officers who can be called on at any time to face the challenges of an active shooter.

Considering these limitations, how can firearms training be implemented in a cost effective, innovative manner that allows the officer to learn, practice, and improve? How is it possible to increase muscle memory, movement, and decision making in a safe, realistic setting? How can a department increase training opportunities while lowering the overall cost of training?

¹ Police Training – Its Needs and Problems, George H. Brereton

² Graham v. Connor

³ Zuchel vs. City and County of Denver, Colorado

⁴ Police firearms training: How often should you be shooting? Dave, Grossi, June 23, 2011 PoliceOne.com

Project Description

In a growing number of police departments, firearms training simulators like DART Range have proven to be an effective platform for training because they provide opportunities for frequent, repetitive practice. Numerous studies support the effectiveness and unique advantages of simulation training.

In 2008, the Royal Canadian Mounted Police (RCMP) began the first of several studies designed to determine if pistol shooting skills could be acquired in a simulated environment, whether these skills could be acquired in the absence of both live-fire and recoil training, and the extent that these skills were transferable to a real-world setting.

At the conclusion of the study, the RCMP determined that pistol training can be conducted in a simulated range environment, and that live-fire and recoil are not necessary to learn how to accurately shoot a pistol. In fact, the studies revealed that a police officer can acquire all of their pistol skills in the absence of live-fire using only simulation training, that the skills are transferable to a real world setting, and that the skills are better maintained than their live-fire trained peers.⁵

In 2010 the Federal Law Enforcement Training Centers (FLETC) staff embarked on a firearms simulation study of their own to look at the effectiveness of training students with firearms simulators. The result of the research showed that the difference between groups trained with laser simulators was statistically insignificant from those who progressed through their handgun training with live fire weapons.

In addition, the use of shooting simulators gave instructors an often-overlooked advantage – the ability to communicate with the students in a normal voice, since hearing protection was no longer required. Further, there were numerous safety advantages to using laser pistols with basic students learning their grip, stance, trigger pull and other essential weapon handling skills on their road to firearms proficiency.

With the ability to handle far more students in a given space than a live-fire range, lower maintenance costs, and greater sustainability, firearms simulation training can be seen as a firearms facility multiplier that quite literally offers more “bang for the buck.”⁶

⁵ International Police Training Journal, Issue 5, March 2013

⁶ ‘Firearms Simulation Study’ in the Spring 2011 edition of the FLETC Journal

Using the DART firearms training simulator as an integral part of a firearms training program promotes more frequent practice and shooting repetition – elements that are key to developing confidence and muscle memory. Unlike live-fire training, there is no associated ammunition cost with simulated training. As a result, there is nothing to limit the amount of rounds an officer fires. This creates an opportunity for an officer to receive training specifically tailored to correcting their firearms deficiencies through repetitive shooting.

Because simulation training is completely safe, firearms instructors can easily evaluate the student and make adjustments in training to strengthen their abilities. A strength of using a simulator to provide repetition and scenario training for firearms instruction is that it provides the range instructor complete control to create training that will best help the individual officer gain confidence in the firearms skills necessary for a rapidly-changing shooting incident. The firearms instructor can use software included with the DART system to create training courses designed specifically to address the weaknesses shown during qualifications.

Implementation of firearms simulator training generally begins with the training staff learning how to develop different courses and scenarios using the DART software. This can be accomplished through instruction with the firearms simulator company in a single day. Once trained, the firearms instructor will be able to create training relevant to the students' specific weaknesses or precise training need. The key element of the simulator training is being able to address firearms concerns quickly, effectively, and in a financially responsible manner. Officer safety is a constant concern for every department. Ensuring that officers receive every opportunity to improve firearms skills provides the officer with confidence and increases the expectation of being able to respond appropriately to emergency situations.

The DART firearms simulator is portable and can be set up in any room. This capability enables scenario training in rooms with furniture, hallways, staircases, etc. Realistically, any place with electricity can become a training site. A benefit of the portability is the department will be able to implement realistic firearms training in different locations. A prime example is the capability to take the simulator to a local school and set up realistic firearms training scenarios inside the school itself. This type of real-life training is invaluable to the officers and the community we serve. The ability to conduct simulator training in local businesses, shopping areas, schools and churches will help our officers to respond quickly, efficiently, and responsibly during an incident.

The ability to safely create live fire simulations is not only essential to the proper training of police officers for firearms qualifications, it is also beneficial to the community to show citizens of the community the reality of firearms incidents. The DART firearms simulator includes a special mode to allow citizens to attempt selected qualification drills and scenario training to show that police training is comprehensive. This can help strengthen police/community partnerships when members of the community are able to experience a simulation of decisions necessary during a shooting situation.

Many departments interact with groups of young people, such as Explorers, who are considering law enforcement as a profession. The DART system will allow these groups to practice firearm qualifications and scenario situations in the simulator. This is an exciting implementation because it will provide opportunities for simulated scenarios to provide training which could help the Explorers decide if law enforcement is a viable career path.

Obviously, training police officers is the main reason to implement a DART firearms simulator. The DART simulator will be used to help to correct deficiencies in traditional firearms qualifications, and to build the repetition necessary for well-trained muscle memory to take over during a shooting incident. The simulator will be used for scenario training, not just in the police department, but out in the community in businesses, schools, and public gathering places. The possibilities for the system are limited only by the access to a projection area and access to electricity.

Employee engagement is another key area that benefits from advanced training. Officers who show that they have the potential to learn new skills and devote themselves to certain training areas prove that they are committed to their job and the department. Richard Axelrod (2010) defines this type of engagement as a “psychological state in which employees feel a vested interest in the company’s success and are both willing and motivated to perform to levels that exceed the stated job requirements.”⁷

⁷ A Need for Change: The Importance of Continued Training and Education for Modern Day Police Officers, Michael K. McHenry

Project Objectives

DART simulation training is often implemented with several objectives in mind.

Reduced Equipment Costs

Simulation training should reduce the amount of live ammunition needed for training annually. While training ammunition is still required for qualification and live practice, interim practice sessions, including time spent with new or deficient shooters, can be done without ammunition using DART Range.

In addition, simulation training will result in less “wear and tear” on service weapons and department-owned range facilities.

Increased Training

Simulation training can dramatically increase the amount of training hours per officer by providing access to a digital range within the department building. For some departments, training is done 15 minutes before or after a shift. This alone can represent more than 60 hours of additional training annually – a 400% increase in the amount of firearms training hours an average officer receives.⁸ Even a more modest approach of 20 minutes once per week would double the average officer’s training time.

Besides an increase in training time, DART simulation training can be used to practice skills and techniques not generally available on a live range due to safety concerns. Some of these skills include:

- Emergency tactical reloading with either hand
- Low-light and judgmental (decision-making) shooting
- Shooting while moving to cover
- One-handed firing
- Giving verbal challenges
- Engaging multiple targets
- Malfunction drills
- Holster drills

Performance data and training times can be collected by the range instructors for every participant and may include pass/fail notations and all remedial training documentation.

⁸ Police firearms training: How often should you be shooting? Dave, Grossi, June 23, 2011 PoliceOne.com

Time Savings

DART simulation training can reduce the number of overtime training hours by eliminating the time required to travel to and from a range, gun cleaning and maintenance, and related activities.

Personnel Objectives

Simulation training reduces the chance of accidental injury or death related to firearm training activities.

Deficient shooters lacking confidence and skills can benefit from remedial training on the DART simulator rather than conducting a probationary release.

Officers who show that they have the potential to learn new skills are more committed to their job and the department.

Timeline/Activities

A timeline to implement the DART firearms simulator begins with the purchase of the DART training system which includes the simulator equipment, projector with speaker, software, laser training weapon(s), and training. Delivery generally occurs within one week of purchase. Training can take place at company headquarters in Orlando, Florida or the department's location. Most training lasts one day, which is enough to learn and begin using the using the system.

Along with various courses of fire that are included with the training simulator, DART includes a digital version of a purchasing department's own state mandated qualification course at no additional cost. This will allow officers to fire repetitive rounds on their own qualification course prior to formal qualification. This type of training can be implemented within a day of taking delivery.

In addition to repetitive shooting, your firearms instructors can create simulated firearms scenarios which will involve movement, concealment, and other important skills.

The addition of the firearms simulator provides firearms training sessions each month rather than the previous schedule of two times per year. The implementation of the simulated firearms training sessions will increase the number of firearms training sessions by 200% for our sworn personnel. This type of cost-effective real-world scenario training with repetition is what can save lives in time of emergency response.

The strength of the firearms simulator training is twofold. First, the system is completely managed by the firearms instructors to create firearms qualifications and scenarios which benefit the student and strengthen necessary skills. Second, because ammunition is simulated, the system can be used to fire exponentially more rounds than could ever be possible with live fire qualifications. The portability of the system and ease of use make the timeline for implementation relatively short to allow the system to be used almost immediately right out of the box.

The rapid implementation of the DART firearms simulator is a realistic goal for police departments of any size. The equipment is portable, and the software is easy to learn and use. The firearms simulator will enable officers to improve their firearms skills and will provide another tool to be used in community outreach.

Participating Agencies/Collaboration

The DART firearms simulator is a self-contained, affordable system and does not require collaboration with multiple agencies. Once implemented, it will provide your department with a tool to reach out to neighboring law enforcement agencies, citizens, businesses, schools, hotels, and stores. It enables training to be fluid, realistic, and useful.

The implementation of this equipment will allow for creativity in training which will enable the firearms instructors to help to correct specific training deficiencies. Officers will benefit from the repetition in traditional firearms training and will be able to participate in scenario training with other officers, which would be too dangerous during live fire training. Additionally, the ability to use the firearms simulator with civilian groups like the Explorers or Citizen Police Academy will provide departments with another outreach tool, which helps members of the community to better understand the responsibilities of the law enforcement officer.

Budget

The cost of a DART firearms training simulator ranges between \$6,900 and \$12,000, with an average cost of just under \$10,000.

These costs include all the necessary items to use the firearms simulator. While there are different software options, all systems come with DART Range and DART Creator software which provides the ability to load, edit, create, and run an infinite variety of courses.

A wide variety of laser training weapons are available for the system including dedicated laser training pistols and rifles with and without recoil, and options for using a department's existing service weapon(s) including pistols, rifles, and shotguns.

All DART systems include a soft-sided carry case; however, a hard-sided, wheeled travel case is available to offer additional protection.

Sole Source Discussion

For the purposes of creating a sole source justification for DART Range, the following details should be considered:

While virtually all other simulation systems use prerecorded video clips as the key component in their training systems, DART training is built around interactive 3D graphics - like those used in most military simulation and training programs. 3D graphics offer several advantages over prerecorded video movies including more accurate shot detection, true randomized responses to officer actions, and easier course creation. Based upon our research, Digimation is the only manufacturer of firearms simulation equipment and proprietary software based on interactive 3D graphics.

Digimation has also developed two proprietary software packages called DART Creator® and DART Studio®. These packages allow for the easy creation of unique training courses that can only be used on DART simulation equipment. DART Creator and DART Studio are the only known software packages allowing for the creation and display of interactive 3D graphic-based courses of fire. DART Creator software is included at no extra charge with all DART systems, while DART Studio can be added to any DART simulator at the time of purchase, or later as requested by the customer.

Finally, the DART system is the smallest full-featured firearms simulator available. The entire system measures just 14 x 12 x 10 inches. In addition, when compared to competitor pricing published in various GSA schedules, a complete DART system is between 5-25% of the cost of competing systems.

In summary:

- 1) DART simulators are exclusively built around a platform of interactive 3D graphics, which provides numerous advantages and futureproofing compared to prerecorded video movies.
- 2) DART is the only simulator to include DART Creator software, which can be used to create all new courses of fire and training content.
- 3) DART is the most compact simulator available.
- 4) No other simulator on the market requires less of an investment than DART.

Digimation is the manufacturer and only source for DART simulation equipment and capabilities.