



How to Purchase a Driver Training Simulator



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AROTECH TRAINING & SIMULATION DIVISION

1229 OAK VALLEY DRIVE • ANN ARBOR, MI 48108 • 734.761.5836 • WWW.FAAC.COM

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Nigel Lindsey-King

30+ years experience with Toronto Transit Commission (TTC) & 15 years overall experience with simulators:

- Superintendent of Surface Transportation Training.
- Curriculum Development Specialist.
- Project Manager for large scale training-related projects & equipment procurement.
- Supervised purchase of all 3 TTC simulators: bus, LRV & subway.

Introduction

Congratulations, you've decided to buy a driver training simulator.

Now what?

Introduction

This presentation is designed to help you navigate through the procurement process to ensure you get the features & functionality that you need in order to meet your training objectives.

Introduction

It is organized to take you through the process in a step-by-step manner. We will cover:

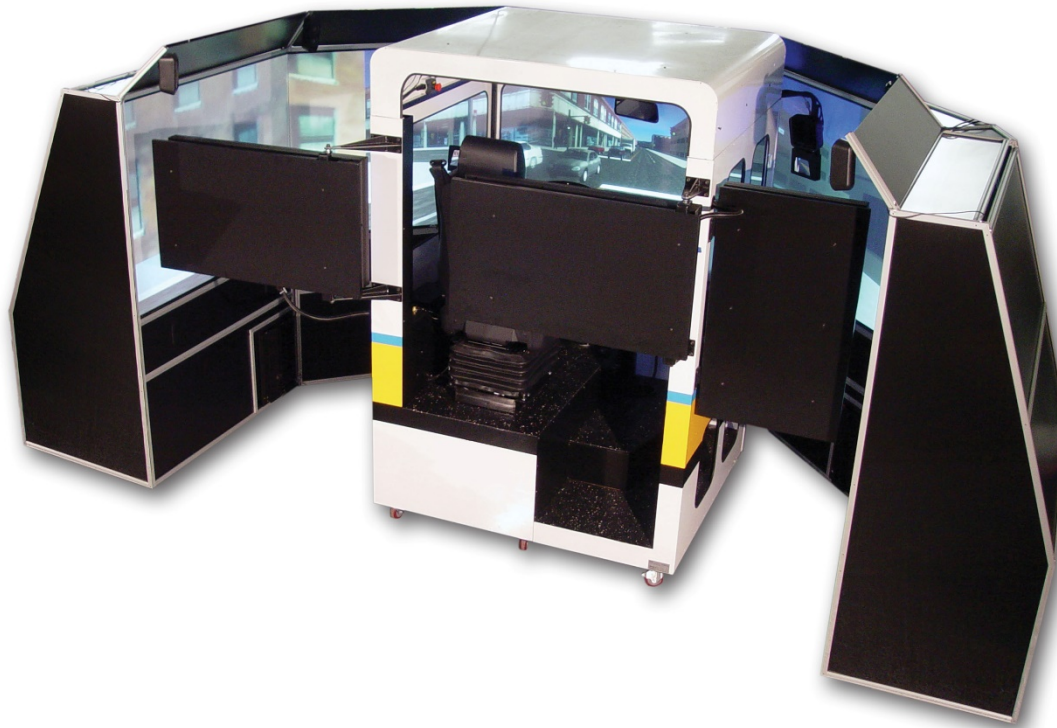
- Defining Your Training Needs.
- Identifying Key Simulator Features.
- Developing a Specification Document.
- Entering the Market Place.
- Conducting a Vendor Meeting.
- Evaluating Vendor Proposals.

Defining Your Training Needs

What kind of simulator training solution do you think you want/need?

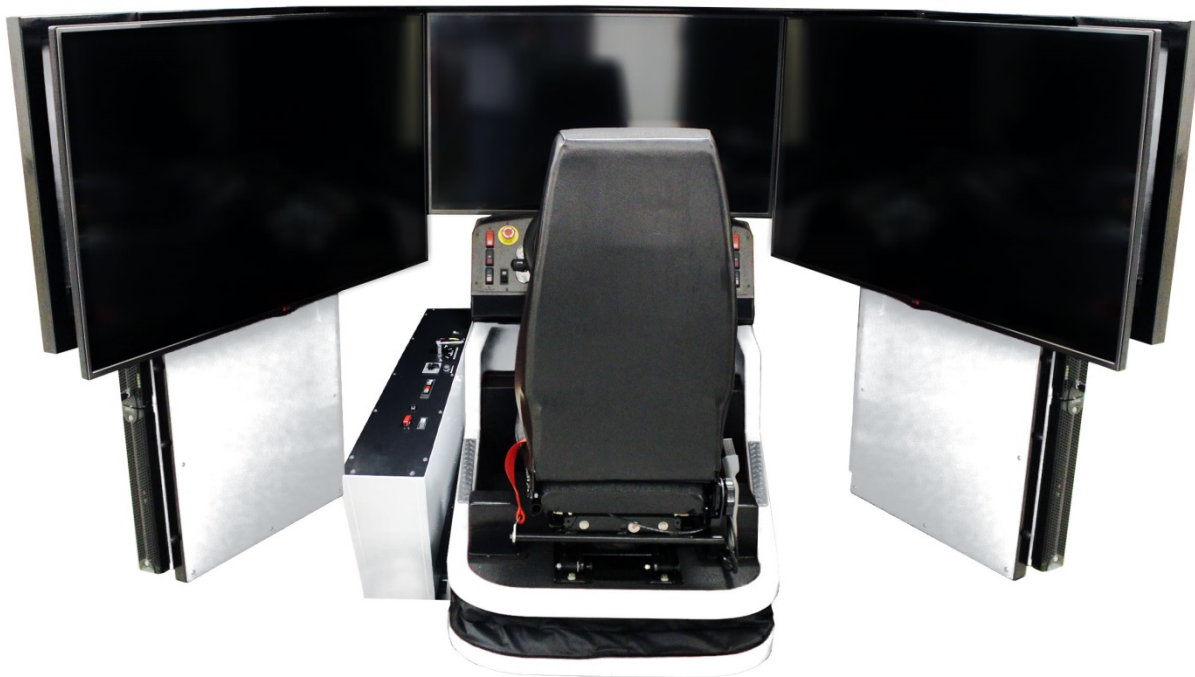
Defining Your Training Needs

- Fixed location, full-mission simulator



Defining Your Training Needs

- Intermediate simulator with smaller footprint.



Defining Your Training Needs

- Mobile training unit.



Defining Your Training Needs

How do you plan to use your new simulator:

- Correct specific problems?
 - Right-side clearance contacts.
 - Collisions at intersections.
- Improve training retention?
- Reduce overall failure rate?
- Modernize training program?

Defining Your Training Needs

Consider the training programs you currently deliver. Do you want the simulator to help you with:

- New hire – training new employees with little or no experience to operate your vehicles.
- Recertification – providing cyclical refresher training for existing employees.

Defining Your Training Needs

- Requalification – requalifying employees returning to vehicle operation after prolonged absence.
- Remedial – providing corrective training to employees after collision.

Defining Your Training Needs

Next, consider the number & type of vehicles that you want the simulator to replicate.

- Most organizations pick make & model of principal vehicle when designing driver's compartment.
- But numerous other vehicle profiles can be added to simulator's performance repertoire.

Defining Your Training Needs

Think about how the simulator is going to fit into your existing programs.

- Don't treat simulator as replacement for vehicle operation or universal bandage for poor training programs.
- If you don't have expertise to integrate simulator in existing training, find supplier who does.

Defining Your Training Needs

Determining how you plan to use your simulator will help you define the scope of the project:

- Number & type of simulators required.
- Required features & functionality.
- Geo-specific vs. generic.
- Type of training package required.
- Location of simulator.
- Ancillary equipment – repeater screens, cameras, office equipment, etc.

Identifying Key Simulator Features

What features & controls do you need to support your training & help trainees buy into the virtual driving experience?

Generally speaking, your simulator should accurately replicate the look & feel of what it's like to operate one of your vehicles in the real world.

Identifying Key Simulator Features

Let's look at some important features you should consider.

- True-to-life driver's compartment.
- Geometrically correct field of view.
- Synchronized rear-view presentation.
- Rear-view mirrors.
- Accurate vehicle models.
- Life-like driving worlds.

Identifying Key Simulator Features

- Motion feedback.
- Life-like audio presentation.
- Autonomous vehicle & pedestrians.
- Instructor station.
- Instructor controlled vehicle.
- Remote control device.
- Scenario building software.
- Training exercises & supporting curriculum.

Creating a Specification Document

Why do you need a “spec” document?

- Part of procurement documentation.
- Shopping list of features & functionality.
- Terms of reference or scope for project.
- Tells vendors about your:
 - Operating environment.
 - Expectations of use.
- Allows you to evaluate vendor proposals.
- Justifies your selection.

Creating a Specification Document

Your spec doesn't need to be complicated, but you should consider the following elements.

- Define project scope – what is vendor expected to supply.
- Provide useful background info about your organization, environment, specific demands, etc.
- List specific simulator features required.
- Define performance requirements.

Creating a Specification Document

- Describe virtual driving worlds, environments & conditions expected.
- Define level of customization required – generic equipment & driving worlds vs. specific vehicles & geo-specific environments.
- Define audio environment.
- Describe proposed simulator location – provide dimensions, proximity to entrances & elevators, etc.
- Detail requirements for Instructor Station.

Creating a Specification Document

- List any specific equipment vendor is required to provide.
- Define training package required.
- Define expectations for trainee evaluation, testing, data collection & storage.
- Provide any specific IT requirements.
- Define warranty & post-installation service expectations.

Entering the Market Place

Now it's time to enter the market place. Here are some ways to find out who the vendors are:

- Perform internet search.
- Contact other transit agencies.
- Use intermediaries such as industry groups, government outlets & umbrella organizations.
- Search industry-specific media.
- Attend industry trade shows, conferences & expos.

Entering the Market Place

Depending on the size & purchasing requirements of your organization you may use one or more of the following methods to contact prospective suppliers:

- Request for Information (RFI).
- Request for Proposal (RFP).
- Sole Source Contract.

Entering the Market Place

Ensure that your RFI/RFP package includes the following so that vendors can comply with your purchasing requirements:

- Submission closing date & time.
- Submittal location.
- Contact information.
- Any required supporting documentation.

Entering the Market Place

Be sure to ask vendors for references & contact information for existing customers.

You may also wish to visit another agency & experience their simulator first hand.

Conducting a Vendor Meeting

A vendor meeting provides an opportunity for perspective suppliers to meet with you face-to-face in order to:

- Clarify understanding.
- Ask follow-up questions.
- Provide additional information.
- Discuss expectations.
- Tour proposed site.

Evaluating Vendor Proposals

This is where the time spent up-front creating a spec document can really pay off.

You can now make a one-to-one comparison between the required elements in your spec and the features & functionality proposed in the vendor submissions.

Evaluating Vendor Proposals

The table below is a simple but effective tool to help you organize your evaluation.

Required Spec Element	Vendor A	Vendor B	Vendor C
Item #1			
Item #2			
Item #3			
Item #4			

- Add extra lines for options & extra features not included in spec.
- Include line for final price.

Evaluating Vendor Proposals

- Insert single required element into each line of 1st column.
- Enter how each vendor proposes to meet requirement in subsequent columns.
- Identify areas of omission or non-compliance.
- List any options or special features over & above spec requirements.
- Enter vendor's price.

Evaluating Vendor Proposals

Determining Best Value

If you are not obligated to choose the lowest bidder, or the vendor who is 100% compliant with the spec, use a “weighted for value” methodology when you’re evaluating the vendor proposals.

Evaluating Vendor Proposals

1. Identify critical technical features & functionality & assign pass/fail criteria.
2. Do same for mandatory administrative requirements.
3. Identify factors for evaluating remaining aspects of proposal, devise standardized scoring & assign points accordingly.
4. Rank competitiveness of vendor prices. Factor in what's included vs. what's not.
5. Total vendor points & pass/fail criteria.

Evaluating Vendor Proposals

In addition to overall cost & vendor compliance here are some other factors to consider.

- Quality & comprehensiveness of vendor's documentation.
- Vendor's willingness to work with you.
- Items identified as out-of-scope.
- Problems identified re: installation or maintenance of simulator.
- Training plan & supporting documentation.

Evaluating Vendor Proposals

- Cost of extended warranties.
- After-purchase services such as:
 - Equipment updates.
 - Software upgrade programs.
 - User support groups, conferences, etc.
- Product's flexibility & possibility for expansion.
- Vendor stability & experience.

Wrap Up

Purchasing a simulator is an expensive & time consuming project. For many organizations it represents a once in a generation expenditure. So it deserves the same careful consideration as purchasing an actual vehicle.

Hopefully, this presentation has shed a little light on the process.

Thank you & good luck!