

### THE GONDOLA PROJECT









**The Gondola Project** is an initiative to demonstrate that Cable Propelled Transit is a viable and proven public transportation option that transforms communities for the better.

It is the first urban application built by the Toronto-based planning shop **Creative Urban Projects** (**CUP** or **CUP Projects**, for short).

It is participatory planning at its best. It brings together a wide network of planners, designers, engineers, advocates, bloggers, researchers and artists from around the globe all dedicated to the idea that everyone doesn't just deserve public transit; everyone has a right to better public transit.

# WHAT IS CABLE PROPELLED TRANSIT?



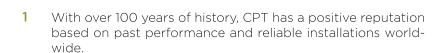
Cable Propelled Transit (CPT) is a family of technologies where automated, passive vehicles are propelled and often supported by industrial strength steel cables.

While the technology is most familiar as ski lift gondolas, funiculars or aerial trams, the technology has recently found usage in urban environments around the world as fully-integrated components of public transit systems.



## WHY CABLE PROPELLED TRANSIT?

### **PROVEN**



In the last 10 years CPT has been successfully used as mass public transit in North America, Europe, North Africa and South America.

- 2 Environmental impacts from CPT are benign. The technology does not require non-renewable energy sources, nor does it expel pollutants.
- **3** CPT technology integrates seamlessly with other transit technologies and parts of an existing transit network. Short wait times between vehicles facilitate easy passenger flow and transfers.
- 4 CPT offers a level of service at or above standard transit technologies with reduced capital and O&M costs.
- 5 CPT vehicles constantly circulate throughout the system. This ensures very short headways between vehicles and eliminates the need for costly scheduling.
- 6 As cable vehicles have no on board motor or complex moving parts, CPT systems generate little noise pollution.



ENERGY
EFFICIENT &
EMISSIONS
FREE



5

EASILY INTEGRATED



4

COST EFFECTIVE SCHEDULE-FREE SERVICE

6

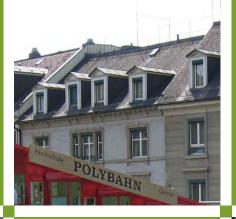
WHISPER QUIET





7

### **EXPANDABLE**



NO IMPACT ON STREET LEVEL TRAFFIC



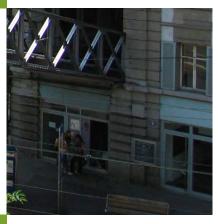
QUICK AND EASY TO CONSTRUCT



10

RELIABLY SHORT WAIT TIMES









NON-INTRUSIVE

- 7 Detachable Grip technologies allow CPT systems to be easily expanded or added on to in the future.
- **8** CPT systems typically operate above mixed traffic. They do not interfere with automobile, pedestrian or bicycle flow.
- **9** CPT infrastructure is manufactured offsite in climate-controlled environments. This allows for quick and easy installation that will not interfere with local business that might otherwise be disrupted by standard transit installations.
- 10 CPT can serve light and heavy passenger loads as vehicles arrive continuously at frequent and consistent intervals. Less than One Minute (LT1M) wait times are more than possible.
- 11 CPT systems do not use up precious road space and can be integrated into existing structures and all kinds of architectural forms.

### FREQ UENTLY ASKED QUES TIONS

### HOW DOES CPT PERFORM IN BAD WEATHER?

CPT technology was developed and perfected in mountainous regions. CPT systems are designed to deal with cold climates, harsh winters, wind, lightning and ice. Systems can operate safely in 100 km/hr winds and simple electrical grounding and de-icing technologies are standard features.

### **HOW MUCH DOES IT COST?**

Generally speaking, CPT systems can be built for 1/3 - 2/3 of the cost of standard transit systems while providing a higher level of service.

### IS CPT ACCESSIBLE?

Yes. All passengers benefit from the barrier-free and accessible vehicles CPT offers.

### CAN VEHICLES BE HEATED AND/OR AIR-CONDITIONED?

Yes. Modern CPT vehicles are equipped with batteries and solar panels that enable vehicles to be cooled and heated as needed.

### WHAT IS THE POWER SOURCE?

Centralized engines drive large bullwheels. In turn, these bullwheels move industrial strength cables that vehicles use to propel themselves forward.

### IS CPT SAFE?

CPT has an excellent safety record. Accidents with people, cyclists, and other vehicles will not happen because CPT systems are separated from street level traffic. Multiple redundancy features guard against mechanical failures and vehicles are equipped with batteries and/or solar panel power sources to ensure constant access to communication.

### IS CPT SUSTAINABLE?

CPT is electrically-powered and its infrastructure has a minimal environmental footprint. On a per passenger kilometer basis, CPT systems typically use less energy than standard transit technologies. Some CPT systems have even been known to consume zero electricity due to site-specific, counterbalanced designs. Historically, many systems were powered exclusively by the weight of waste water.

### HOW DOES IT FIT WITHIN THE URBAN ENVIRONMENT?

CPT thrives in many diverse environments. Sound urban design and design thinking should be employed throughout planning, design and implementation to address local characteristics and increase the potential for success.

### WHAT ABOUT PRIVACY CONCERNS?

Vehicles can be oriented and towers positioned so as to mitigate undesirable views for passengers and residents alike.

### ISN'T CABLE TOO SLOW?

CPT systems achieve average speeds equal to or greater than standard transit technologies as they are not affected by street level congestion. Travel times are also reduced because of dramatically reduced wait times between vehicles.

### WHAT ABOUT PERSONAL SAFETY AND EMERGENCY SITUATIONS?

All CPT stations are secure and staffed with well-trained attendants. Station configurations allow for all-female cars during the day and single-rider/group cars during the evening. Vehicles are monitored by closed circuit camera and voice intercom. Fire suppression systems can also be installed in vehicles.

### CAN CPT SYSTEMS HAVE MULTIPLE STATIONS?

Multiple stations and stops are easily implemented with CPT.

### ISN'T CPT ONLY GOOD FOR MOUNTAINS AND SKI RESORTS?

Historically, CPT was developed to overcome challenging geography but it also works excellently in undemanding terrain and dense urban environments.

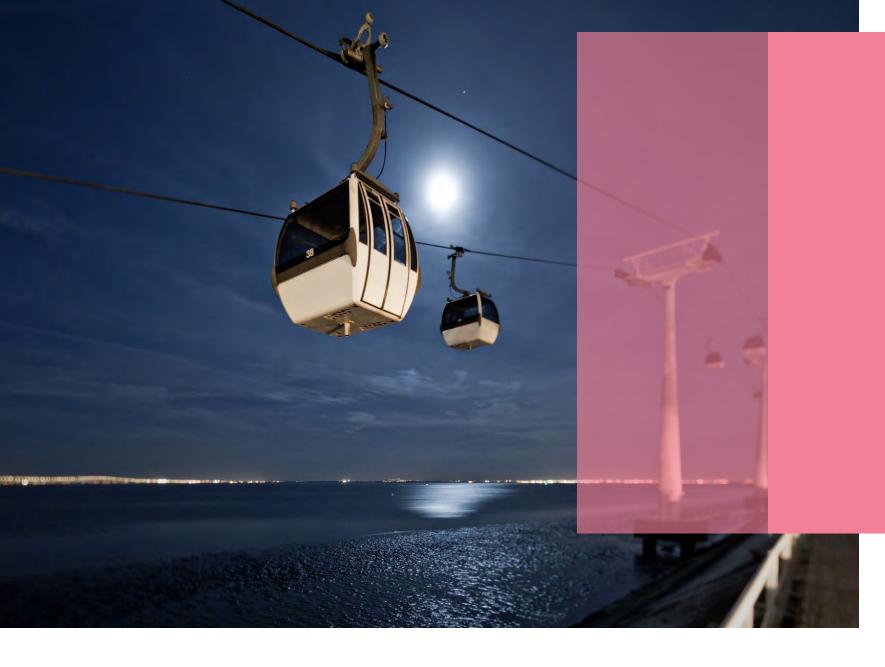
### ISN'T THIS NUTS? WILL IT EVER HAPPEN?

That's up to you.

### **CAN CPT TURN CORNERS?**

CPT systems have been navigating corners for 150 years. Recent technological developments have made this feature cheaper and easier to implement than ever before.





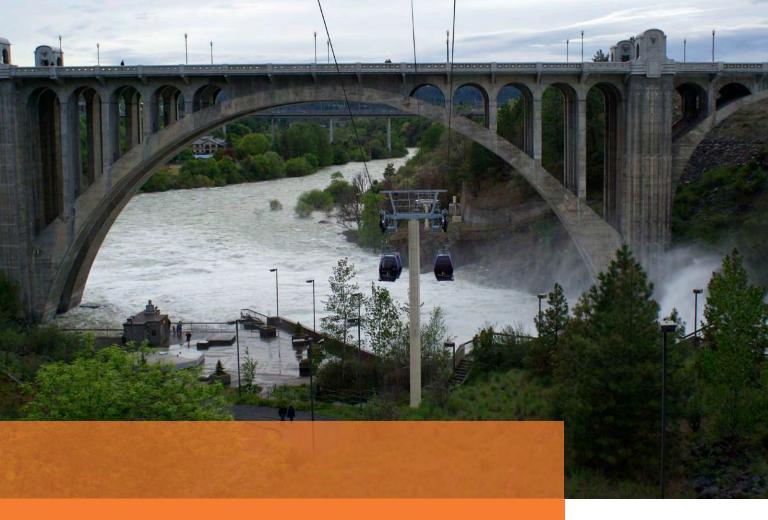
## HOW CAN CUP HELP?

**CUP** has almost 4 years experience researching, investigating and consulting on cable transit from an urban planner's perspective. We've worked with the cable industry, academia, think tanks, the private sector and NGOs.

We are one of the only planning shops in North America with comprehensive, first-hand knowledge of and experience with this emerging technology.

If you're interested in cable transit, **CUP** can help:

- Host training seminars to help you and your staff better understand cable transit so you can apply it in your own practice.
- Supply you with best practices advice for cable transit.
- Provide urban design suggestions and guidelines for cable transit.
- Speak about cable transit at your event or to your organization.
- Conduct cable transit feasibility studies.
- Bring together communities who may want or be affected by a cable transit line.
- Organize and lead cable-oriented workshops and charrettes.
- Work alongside your existing team to help support any cable-related study.



### **CREDITS**

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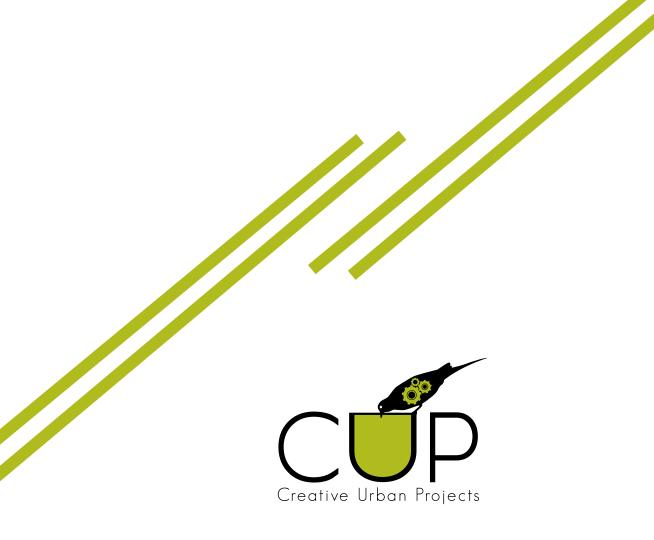
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Must all urban planning firms be the same?

Almost everything we consume has been customized to the specific tastes of particular markets. And yet the urban planning industry tends towards a 'one size fits all' model. CUP rejects that model.

CUP believes that the work, design and techniques used in urban planning should be as varied as the cities they're used in. In this way, cities, politicians, private industries, communities and nongovernmental organizations can select from those that best agree with their own sensibilities.

We know that means we won't appeal to everyone and we're okay with that. After all, appealing to everyone is exorbitantly expensive and (also) impossible. We'd like, instead, to appeal to those of you who've always wanted something more intuitive, creative and unique but never had that choice presented to you. We want to invite you to the table and ask, "How can we help you build something different?"

Maybe we should talk.