



Children “emPOWERed” with Gift of New Mobility Thanks to Partnership Between Local Non-Profit and Professional Engineers

EDMONTON – Five children between the ages of two and five can now move more independently thanks to the innovative emPOWER Car Project, which offers customized, motorized mobility vehicles to children with disabilities. Power mobility devices like these enable children to move and explore independently during activities, such as family walks or trips to the mall or library, rather than relying on a parent or caregiver to push them in a wheelchair.

These vehicles are modified to suit each child’s unique mobility needs and growth, offering them more independence and bridging accessibility gaps at a younger age. Children typically only receive power mobility devices when they are older, missing the window for critical periods of brain development.

“This project highlights what can be achieved when engineering expertise meets the needs of our community. This commitment to improving lives is a hallmark of the engineering profession, and APEGA is so proud to be a partner on this project and is thrilled to see these children experience increased independence,” says Jay Nagendran, P.Eng., FCAE, ICD.D, FEC, FGC (Hon.), APEGA registrar and CEO.

Professional engineers volunteering with the Association of Professional Engineers and Geoscientists of Alberta (APEGA) and physical and occupational therapists from GRIT, Canada’s hub for inclusive early childhood learning, partnered to create the emPOWER Car Project. On November 28, 2024, the children received their emPOWER vehicles at a handover celebration at Safety City, ready to enjoy their increased independence and mobility.

EmPOWER mobility vehicles take only 20 hours to build and cost approximately \$700 to produce, a dramatically lower cost than traditional power mobility devices that typically range in the tens of thousands of dollars. Portable and easy to handle, these vehicles can be transported in the trunk of a car and have been tested in diverse weather conditions—from snow to mud—to ensure children’s opportunities for movement year-round.

“The emPOWER vehicles are an incredible gift for these families. At GRIT, we know how valuable and affirming it is when children can gain independence by reducing barriers to mobility. We are so grateful for the generosity of APEGA and excited for the five children who will now have more opportunities to explore and interact with the world around them in new ways thanks to their emPOWER vehicles,” says Amber Mack, CEO of GRIT.

APEGA volunteers and GRIT will continue working together to build more emPOWER Cars and to refine the design based on user feedback. Anyone who would like to support the emPOWER Car Project and similar projects can do so at gritprogram.ca/donate.

FAST FACTS & TIMELINE:

- 2018:** A professional engineer working with GRIT asked APEGA for help repairing a well-used mobility device called the Cooper Car.
- 2019:** The emPOWER Project Team was formed, joining professional engineers and GRIT therapists. The Cooper Car repairs were completed, and the team of professional engineers realized a different type of vehicle could better meet the children’s needs. The team decided to design a new, innovative car and began preliminary design and prototyping work.
- 2020:** The pandemic brought new challenges, but volunteers worked virtually and held steady to their goal.
- 2021:** Work on the prototype continued, including mapping testing and certification needs. Prototype testing started in various locations and conditions.
- 2022:** Licensing work began to determine necessary certifications for the vehicle. Mechanical parts for four more cars were assembled.
- 2023:** Electrical components for the vehicles were completed.
- 2024:** Programming and licensing were finalized, and the emPOWER vehicles were formally delivered to the children at a handover celebration in Edmonton.

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ABOUT APEGA

As the regulator of engineering and geoscience in Alberta for more than 100 years, APEGA continues to drive the province forward with courage and innovation. We are the largest regulator of self-regulated professionals in Western Canada, with nearly 69,000 registrants who safeguard the public welfare and contribute significantly to Alberta’s economic success and quality of life.

ABOUT GRIT

GRIT has been a leader in inclusive and equitable childcare practices for children with disabilities and their families for over 40 years. As Canada’s hub for inclusive early child care and education, GRIT’s professional knowledge is informed by research and industry best practices to achieve the highest possible outcomes for children, families, educators and community partners. GRIT early learning providers work directly with families and educators to leverage their already-established knowledge and strengths. GRIT programs enable children with disabilities and their families to live their fullest lives and meaningfully participate in everyday activities and routines through programs for families and educators, while improving quality of care for all children in early learning settings.

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