



crac-aclg.ca



Presentation

National Task Force on Vehicle Weights and Dimensions Policy

Alberta All Terrain Cranes Pilot Project Survey Results

December 7, 2022

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About CRAC-ACLG

- National organization, founded in 1998
- Represent crane rental companies, worldwide manufacturers and suppliers of cranes and equipment, and suppliers of services used in the specialty crane rental business in Canada
- 130 member companies across Canada, Asia, the United States and Europe representing close to one hundred thousands employees



About CRAC-ACLG

- Québec, Ontario & British Columbia are members of their respective provincial crane rental/owner associations.
- Our members support oil and gas, wind and renewable energy, mining, forestry, electricity and utilities, construction and infrastructure development to name a few.



Affiliations

ICSA - International Crane Stakeholders Assembly

- SC&RA - Specialized Carriers & Rigging Association
- CICA - Crane Council of Australia
- JCA – Japan Crane Association
- AEM - Association of Equipment Manufacturers
- FEM - European Materials Handling Federation

World Crane & Transport Alliance / International Union of Operating Engineers



Why we are here

2017 – Association embraces representation's mandate

2017 - Association - Harmonization Initiative Western Provinces

2017 – BDRC First Presentation Task Force

2019 – Engaged with Alberta Ministry of Transportation

2021 - Launched of the AB All Terrain Crane Pilot Project

2022 - Amendment to the Pilot Project

2022 - Alberta Pilot Project Member Survey

What's the difference?

TRUCK CRANE



ALL-TERRAIN CRANE



AT's adaptive steering features



$v < 18.6 \text{ mph}$

$v < 30 \text{ km/h}$



$18.6 \text{ mph} \leq v \leq 31.1 \text{ mph}$

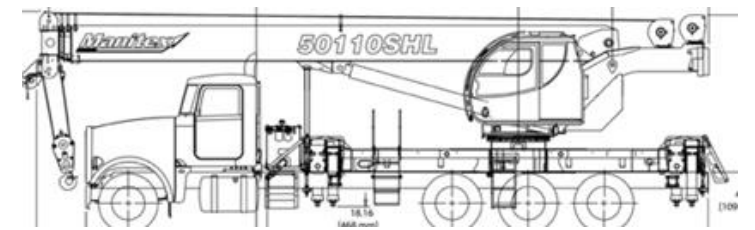
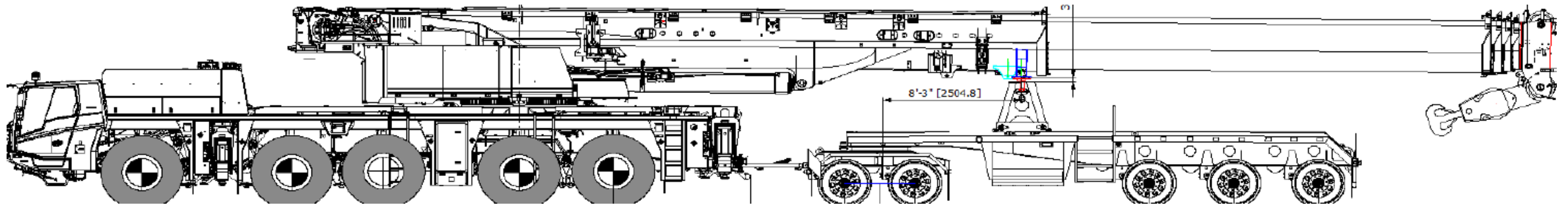
$30 \text{ km/h} \leq v \leq 50 \text{ km/h}$



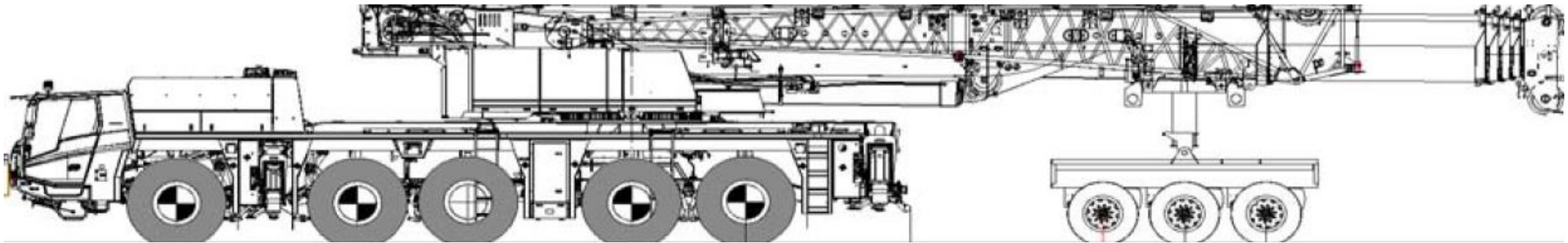
$v > 31.1 \text{ mph}$

$v > 50 \text{ km/h}$

Prior to Pilot Project

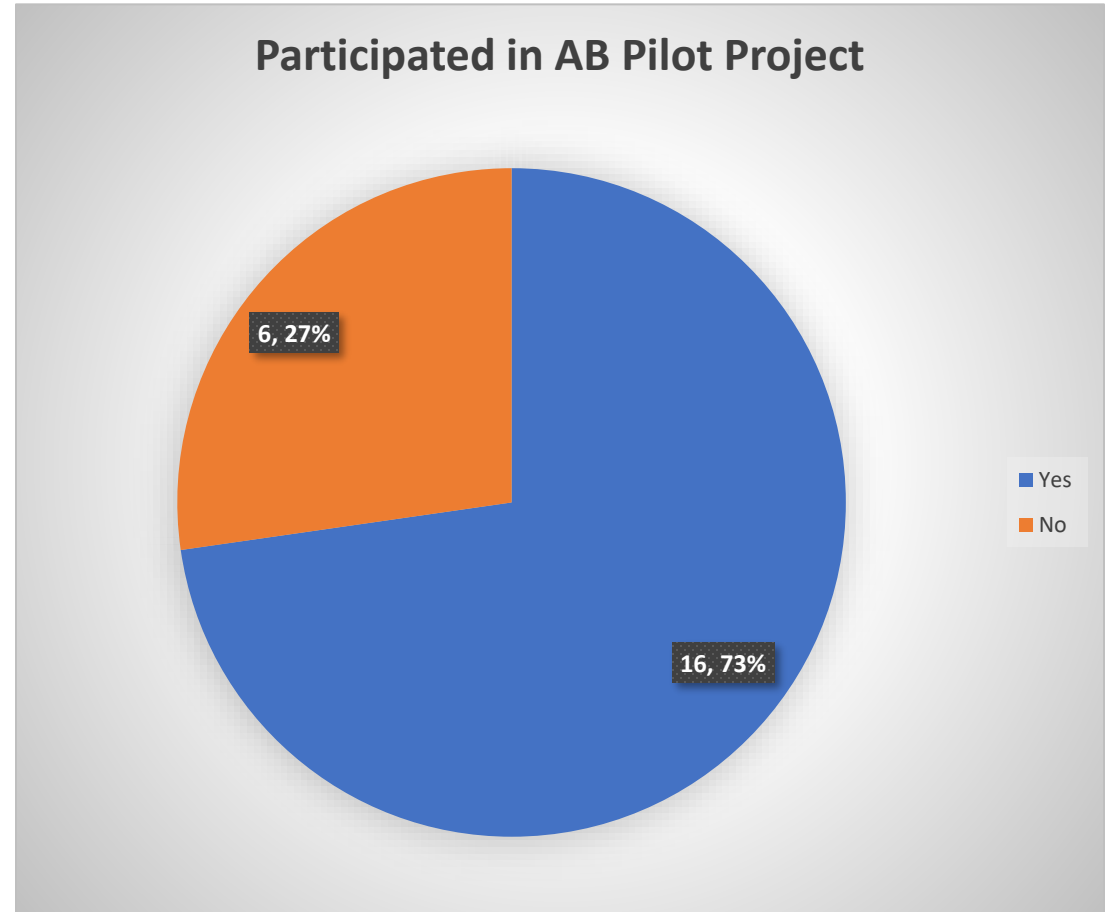


Pilot Project



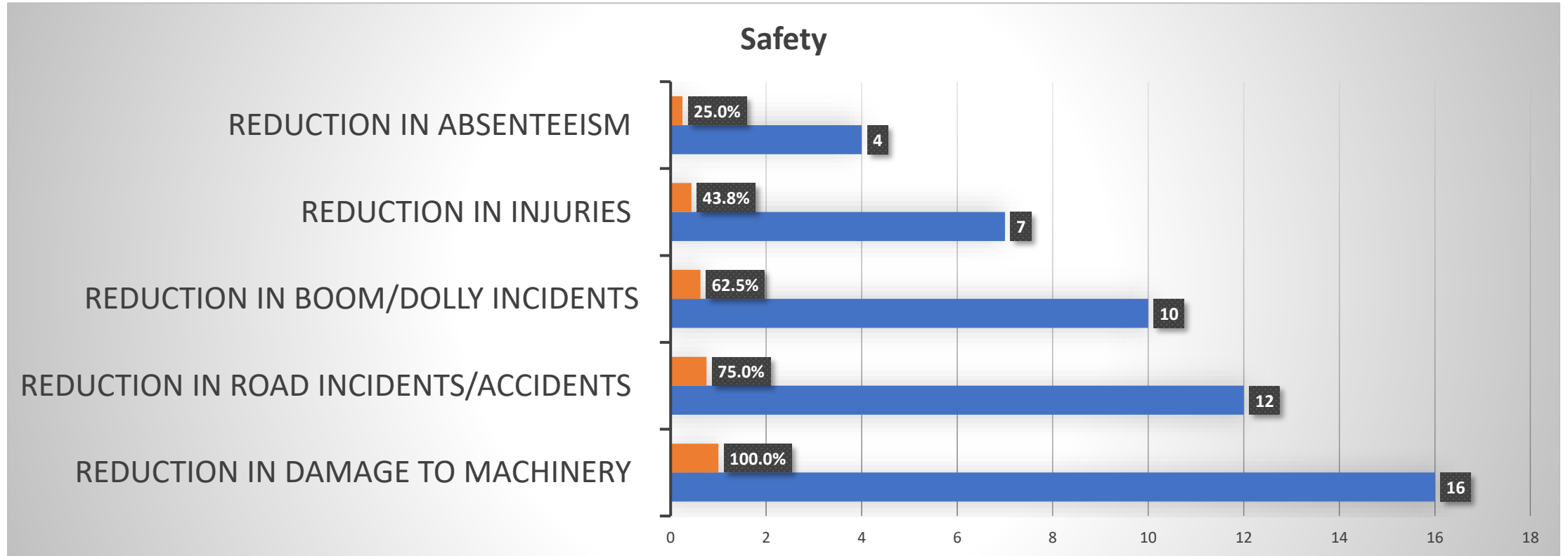
Survey Participants

- Crane rental company members operating in Manitoba, Saskatchewan, Alberta and British Columbia
- 22 responded
- 6 companies did not participate
- **16 participants** from **12 companies** operating all-terrain cranes in Alberta



Spring Ban 2021 vs 2022

Impact on Safety



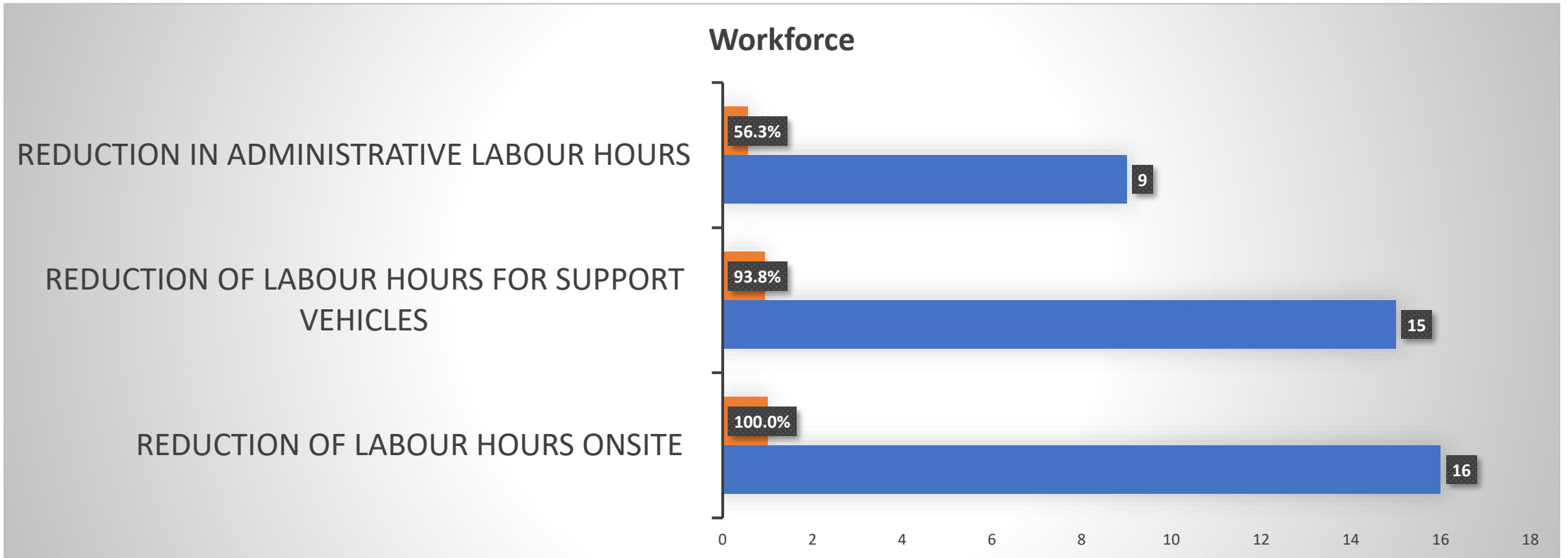
Safety Impact

- “We were **able to keep** the outriggers, jibs and auxiliary winches on the cranes”
- “Driving on slippery, muddy, or inclement road conditions with added axle weights **increased traction, far safer and less stressful**”
- “Typically pulling a 5-axle boom dolly - we can run a 3-axle dolly, this **effectively lowers our gross weights**”
- “With the reduced amount of tail-swing, we **didn't have a single incident in ban season**”
- “Definite reduction in near misses on **public roads** as well as **congested areas** in and around our communities”

... Safety Impact

- “**Down by 75 percent** incidence frequency due to the new axle weights during spring ban compared to last year”
- “The less time we spend reconfiguring the **less incidents** we have”
- “**Reduction of pinch / crush point injuries** from outrigger removal / installation”
- “**Less driving hours** for transport by reduction of an extra load for all terrain cranes”
- “**Reduction** of manhours and the potential for **incidents** and near **misses** by not having to reconfigure equipment during spring ban”

Workforce



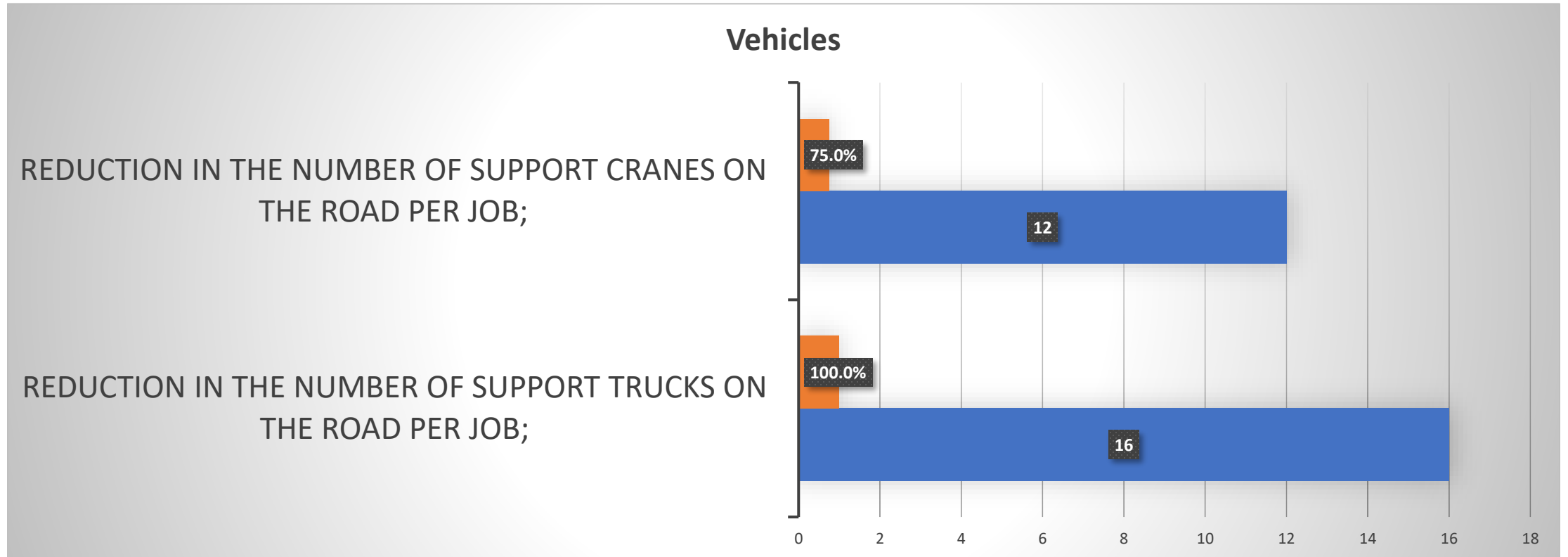
Impact on Workforce

- “Without having to remove outriggers from our larger All-Terrain cranes, we were able to **reduce** the amount of **fatigue** experienced by our operators. The removal and installation of outriggers takes a couple hours in our yard, and a couple hours on site. Sometimes, the outriggers **would require additional transportation** trucks to deliver the crane to site. This would in turn, tie up another operator.”
- “With a large workload and less availability of manpower during the busy spring turnaround season it **made it a lot easier** to ensure each job had the proper number of people to **complete jobs safely** without having to remove and install components.”

...Impact on Workforce

- “The pilot program has allowed us to mobilize and demobilize our cranes with **less loads/resources** as well as with more attachments on the crane (IE: Jibs) which in turn **reduces the amount of labor** and resources required”
- “**Lower risk factor** due to not having to dismantle the equipment”
- “**Overall morale was higher** due to workers not having to perform the additional tasks”
- “Able to complete **more work with the same crew**”

Impact on Support Vehicles



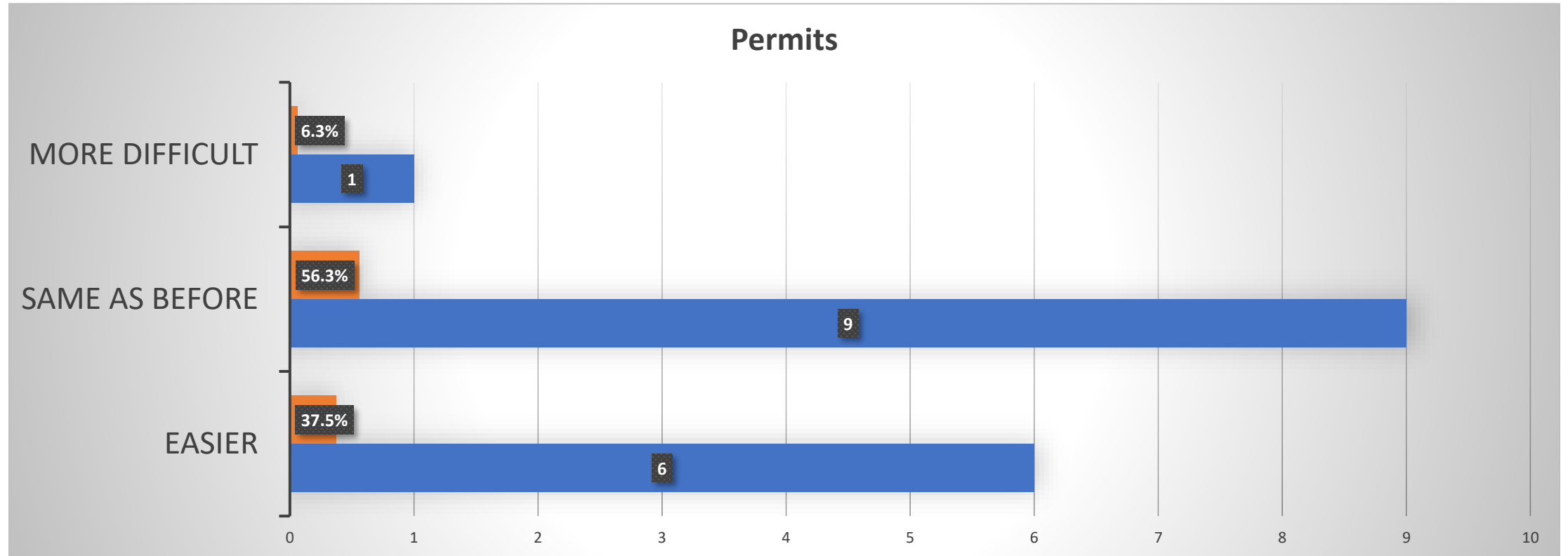
Impact on Support Vehicles

- "We have started to **switch** our cranes over to **smaller dollies**, due to the higher weight limits allowed on the cranes now we don't require 5 axle dolly's we are able to keep the **total weight down** on the crane from 85000 kg to around **67000 kg**, we are burning **35 percent less fuel** with a smaller dolly. It is also **helping with the training** of new operators in the industry it is a lot easier to **back up a 3-axle** boom dolly vs a 5-axle boom dolly."

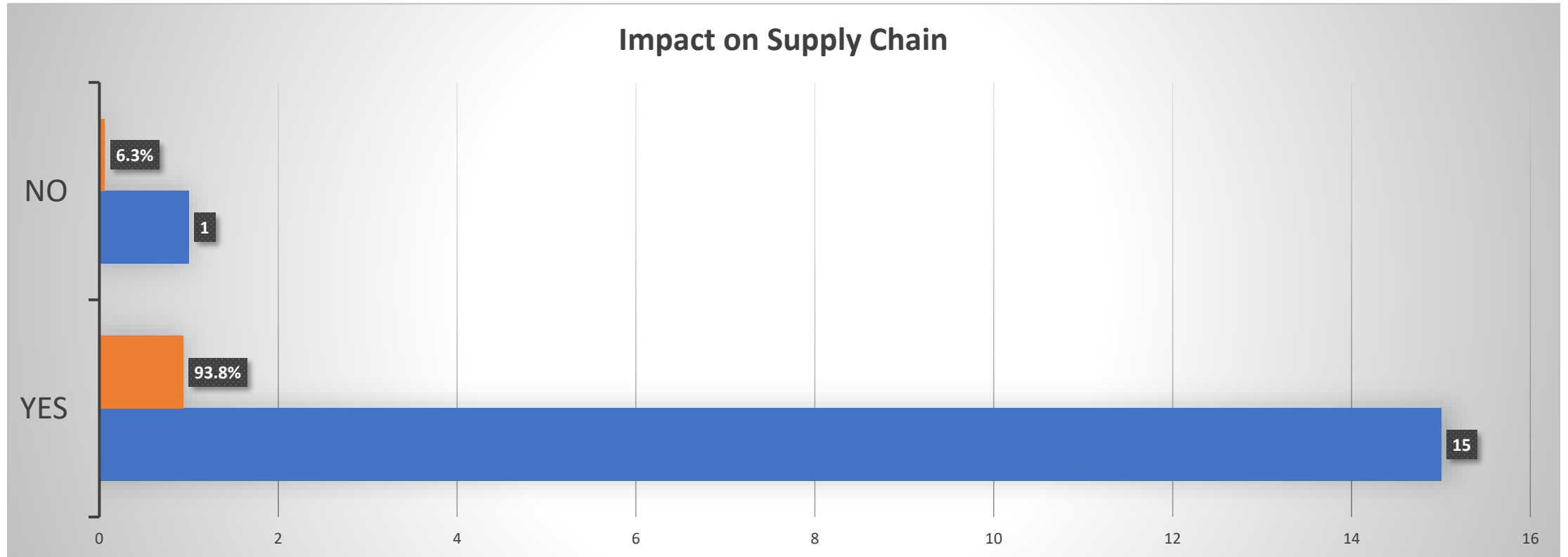
...Impact on Support Vehicles

- “Installing outrigger beams on **tight work sites** was **reduced**”
- “**Less vehicles** on the road, gives us less exposure for both **safety** and DOT incidents”
- “We were able to perform **more services** for more customers while utilizing **less vehicles**”
- “Significant **reduction** on vehicle **costs**”

Permitting



Positive impact on supply chain



Challenges with Municipalities

- “All permits we requested were **approved**”
- “We struggled in some areas. On some occurrences they would allow the Pilot Program weights and not on others. It was **inconsistent** but seemed to **improve as time moved on** and some issues were a mute point once we got into normal summer seasonal weight allowances”
- “We were **happy with the cooperation** from the municipalities once we provide the information to them”
- “The **bridges** all over Alberta seem to be a problem with **limiting weight factors**”

Overall Comments

- “By raising the crane axle weights, we can **get away from running converter style boom dollies**”
- “We are able to be **legal year round with all 5 axle** and smaller cranes. This can allow us to keep the crane around **15-20000 kg lighter**”
- “It allows us to **save on fuel**, operator training, cost of building 5 axle dollies, the permits are **50 percent cheaper** with the 3 axle”
- “3 axle boom dolly causes **less traffic congestion** as the crane gets up to speed faster when its that much lighter. When travelling throughout the city you **don't have to worry** as much about your **tail swing**”

Overall Comments

- “This is a **positive addition** in safely moving our oversized vehicles and overall cost savings on all fronts with less vehicles on the roads, less fuel burned and **safer driving** conditions”
- “The **ultimate goal** would be to increase axle weights for all-terrain cranes to eliminate the use of crane dollies year round”
- “Thankful for the **practicality** that was observed throughout the pilot project. We have **larger tires, and more displacement** than other commercial vehicles. It makes sense that we wouldn't be bound by the same restrictions”

Conclusion

- Increasing axle weights allows the transfer of weight back to the crane and **improves control, traction, stability and braking**
- Working toward **harmonizing weights & dimensions between provinces will improve safety on public roads**
- Envisioning the roads and infrastructure of tomorrow should be supported by a **Canada wide study on bridge formulas**



Thank you ~ Merci

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