

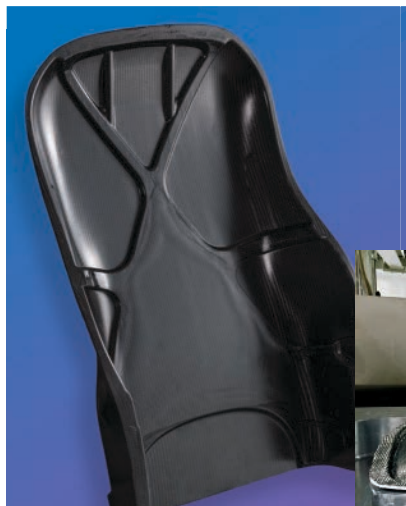
Short cycle, Novel, Affordable Processes

# SNAP Composites

Industrial R&D Group

## Thermoset processing experience at your service

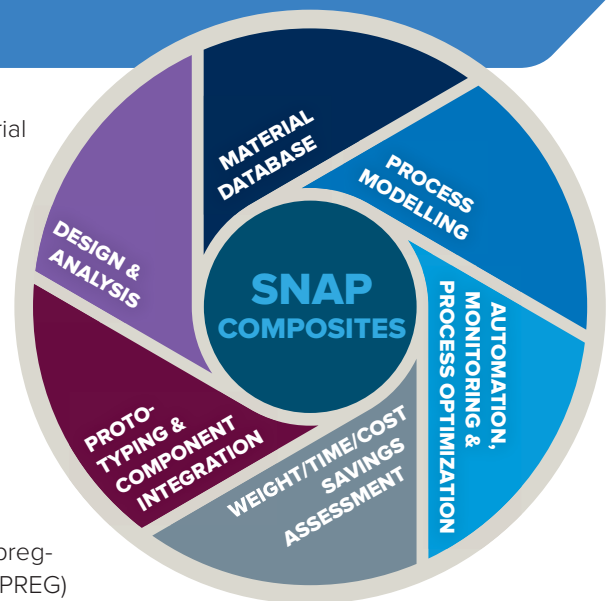
SNAP Composites is an upcoming Industrial R&D Group led by National Research Council Canada (NRC) focusing on low-cost manufacturing of advanced thermoset composites. Advanced thermoset composites are one of the leading alternatives for reducing vehicle weight and increasing mechanical performance. NRC has extensive expertise in manufacturing thermoset composite solutions, covering all aspects of the



development cycle: from material selection, design and simulation, to manufacturing and performance evaluation.

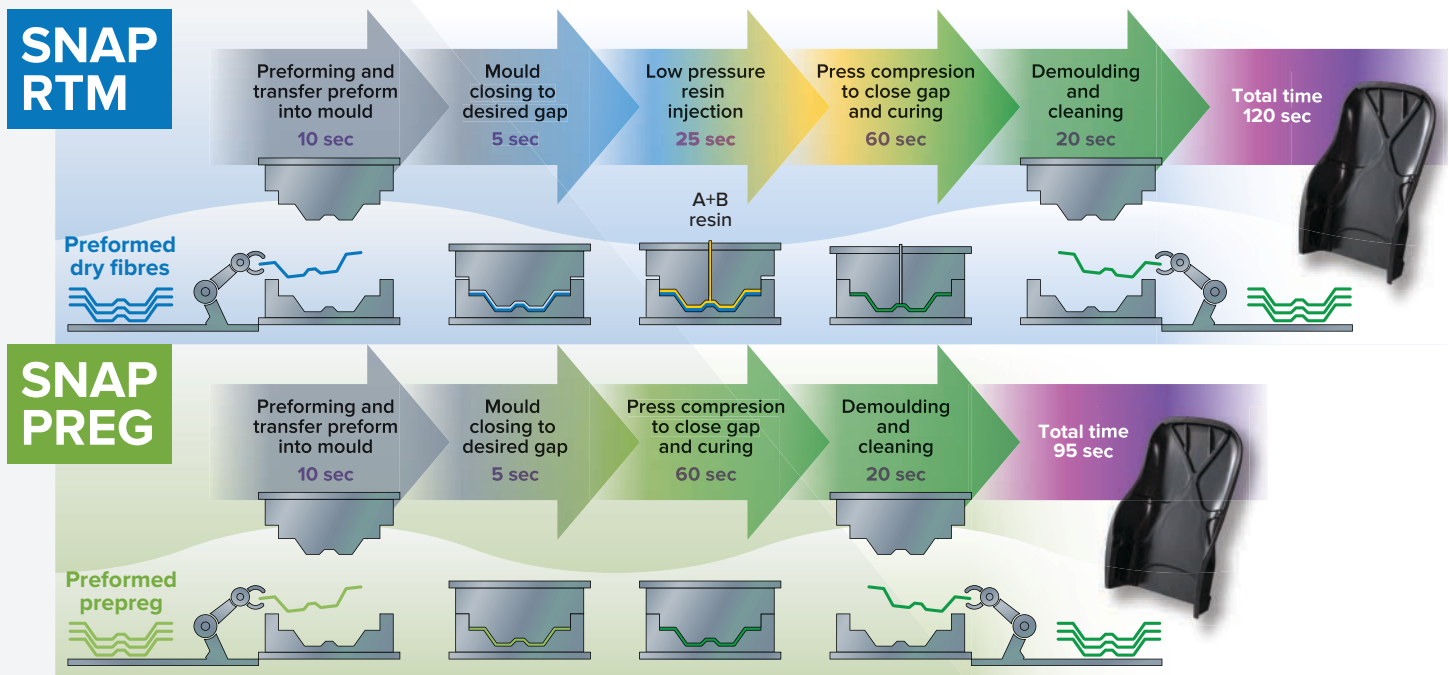
## SNAP Composites

NRC's mission is to help clients bring new and emerging technologies to market. SNAP Composites investigates two processing families, RTM-Compression Moulding (SNAP RTM) and Prepreg-Compression Moulding (SNAP PREG) to rapidly and efficiently manufacture integrated structural composite parts: **cycle time target < 2 min.** NRC is working to provide the most cost effective tailored material and process composite solutions to the transportation industry.



## Why join SNAP Composites?

SNAP Composites brings together OEMs, tier 1s, material suppliers, and mould makers across the supply chain to accelerate the commercialization of advanced composites by lowering the cost through the shared development resources. By joining SNAP Composites, your company can gain access to these technologies and expertise, lowering risk and costs. As a member, you help set the goals of SNAP Composites, based on your company's priorities. NRC experts, in collaboration with industry partners, develop technologies in accordance with these priorities.



SNAP RTM	SNAP PREG
<ul style="list-style-type: none"> <li>› RTM-Compression Moulding</li> <li>› Using snap cure resin technology and dry reinforcement</li> <li>› Lower capital investment compared to HP-RTM</li> <li>› Ideal for complex geometries with deep part draft</li> <li>› Ideal for components with near Class A surface requirements</li> </ul>	<ul style="list-style-type: none"> <li>› Prepreg-Compression Moulding</li> <li>› Using prepregs with snap cure resin technology</li> <li>› Achieving rapid cycles times</li> <li>› Ideal for complex geometries with reduced part draft</li> <li>› Ideal for components with Class A surface requirements</li> </ul>

#### SNAP processes benefits

- › **S**hort cycle, **N**ovel, **A**ffordable **P**rocesses to manufacture of complex geometries
- › Enabling weight reduction, part integration and multi-material assembly
- › Towards Industry 4.0: use of automation and process monitoring with state-of-the-art sensing technology and centralized digital database to further optimize the manufacturing processes



#### Become a member

We are currently seeking new members to join SNAP Composites. Contact us to find out how your company can join this industrial R&D group.

#### What NRC offers

- › Access to unique technologies, state of the art equipment, tooling and testing services:
  - Pinette 1250T hydraulic press
  - Polytec multi-component resin injection system
  - Fully equipped characterization labs: DSC, DMA, TEM, TGA, rheology and permeability measurement tester
  - Demonstrator tools
  - Quasi-static and fatigue mechanical characterization
- › Support in developing cutting-edge technologies at an affordable cost
- › Expertise in simulation, process modelling and process monitoring
- › Make use of skills and expertise that are aligned with your needs
- › Drive to expand your technical capabilities in the area of thermoset composite moulding

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