

Using predictive engineering analytics to improve heavy-equipment performance

Complexity is the new norm in machine design






 <p>Globalization and fiercer competition</p> <ul style="list-style-type: none"> • New players entering the market • Globally-distributed manufacturing • Fine-tune products for local markets 	 <p>Stricter regulations</p> <ul style="list-style-type: none"> • Reduce emissions • Increase fuel efficiency • Improve comfort and safety 	 <p>Configurability</p> <ul style="list-style-type: none"> • Increased number of variants • More testing required • More complexity
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OEMs see major trends as opportunities

<ul style="list-style-type: none"> ✓ Increasing importance of the aftermarket ✓ Higher demand for customization ✓ Increasing environmental requirements ✓ New technologies and ways to use machines 	<p>Most OEMs see themselves as innovation leaders in farming practices.</p> 	<p>Support the green revolution with innovative development processes.</p> 
	<p>Develop customer-centric technology solutions.</p> 	<p>Need for investment strategies that integrate external innovation with the internal R&D portfolio.</p> 

(Source: The Boston Consulting Group, "The lessons from the frontlines of the agtech revolution," October 2016)

Enabling success with innovations in machine engineering

<p>Integrate and digitalize the entire value chain</p> <ul style="list-style-type: none"> ✓ Increase productivity ✓ Improve fuel economy and durability ✓ Reduce cost of ownership ✓ Complete construction projects faster 	<p>Fuel economy and energy management</p> 	<p>Structural integrity and durability</p> 	<p>Operational efficiency</p> 	<p>Noise and vibration</p> 	<p>Controls integration</p> 
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(Source: McKinsey & Company, "Reengineering construction equipment: from operations focused to customer centric," April 2016)

Predictive engineering analytics extends the value of product lifecycle management

<ul style="list-style-type: none"> ✓ Open and managed environment for integrated engineering tools ✓ Systematically connect multiple engineering disciplines ✓ Expand leadership and synergies in multi-domain products ✓ Enable re-use of models and data ✓ Capture and transfer knowledge with data analytics 	 <p>For off-highway manufacturers, success depends on their ability to address the increasing complexity in machine design while maintaining engineering process efficiency.</p>
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Discover how the Simcenter™ portfolio from Siemens Digital Industries Software can help you improve heavy-equipment performance thanks to predictive engineering analytics by going to: www.siemens.com/plm/heavy-equipment-engineering