

# From Torque Control to Tightening Assurance System

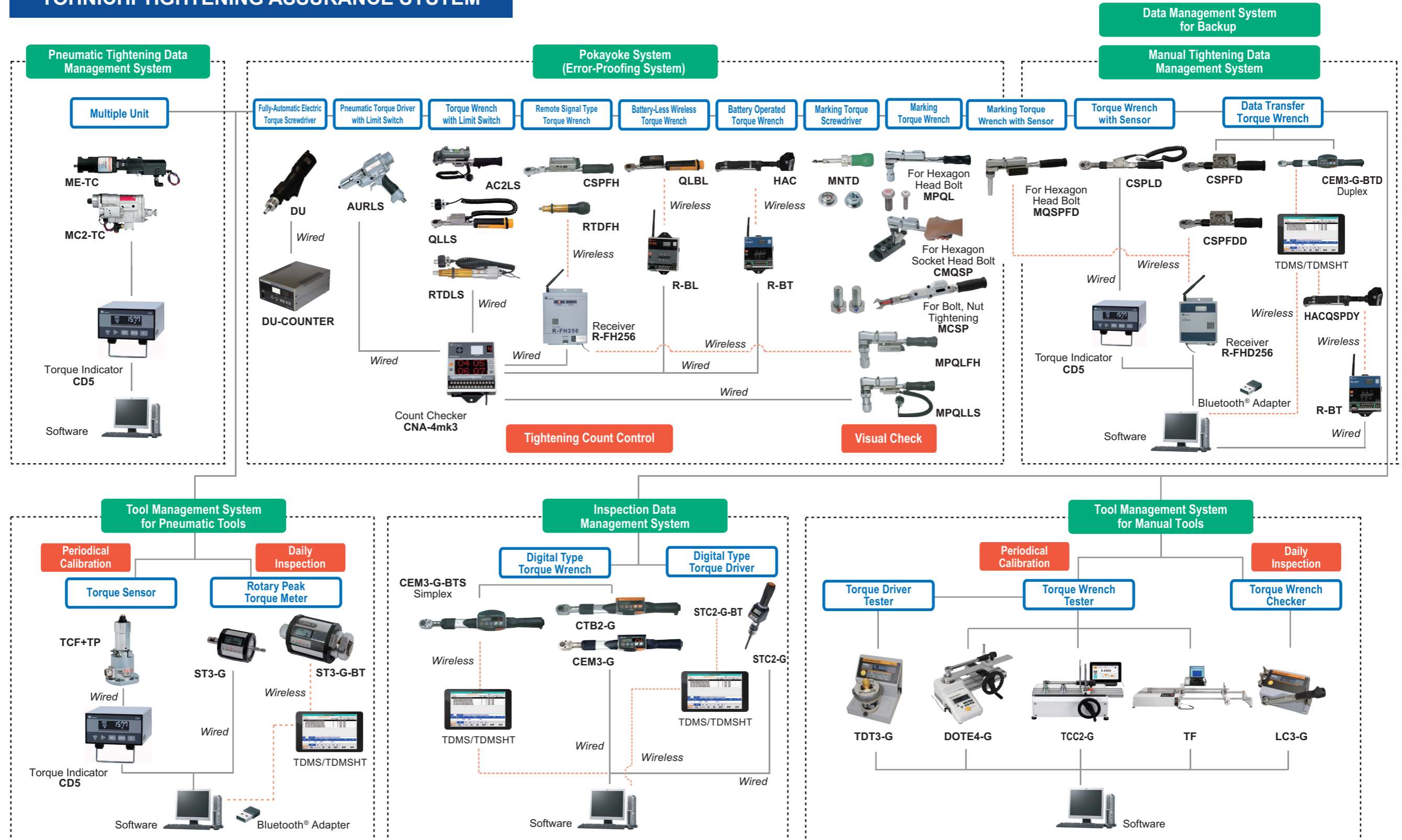
Tohnichi's Torque Assurance System advises the users how to tighten bolts properly and how to eliminate various mistakes which occur during bolt tightening operations.

Total Tightening Management System, which completes tightening assurance, will be created through cooperation of your staffs. Each component and product which consists of the system can be sold separately. The components and products are described in the catalog.

### Characteristic factors (4M's) of defects in bolt tightening

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|---|---|
| <p>1. <b>MAN</b> (Tightening operator human error)</p> <ul style="list-style-type: none"> <li>· Missed tightening</li> <li>· Improper tightening tool usage</li> </ul>  | <p>3. <b>MACHINE</b> (Improper tightening equipment)</p> <ul style="list-style-type: none"> <li>· Inaccuracy</li> <li>· Mechanical failure</li> </ul>   |
| <p>2. <b>METHOD</b> (Improper tightening specification)</p> <ul style="list-style-type: none"> <li>· Wrong tightening value specification</li> <li>· Wrong tightening procedure</li> <li>· Wrong tightening tool selection</li> </ul> | <p>4. <b>MATERIAL</b> (Improper screw joint material)</p> <ul style="list-style-type: none"> <li>· Part out of tolerance</li> <li>· Defective part material</li> <li>· Insufficient screw part lubricant</li> </ul> |

## TOHNICHI TIGHTENING ASSURANCE SYSTEM



Selection of Torque Products

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