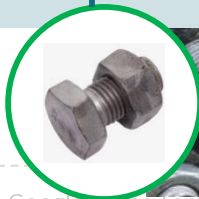
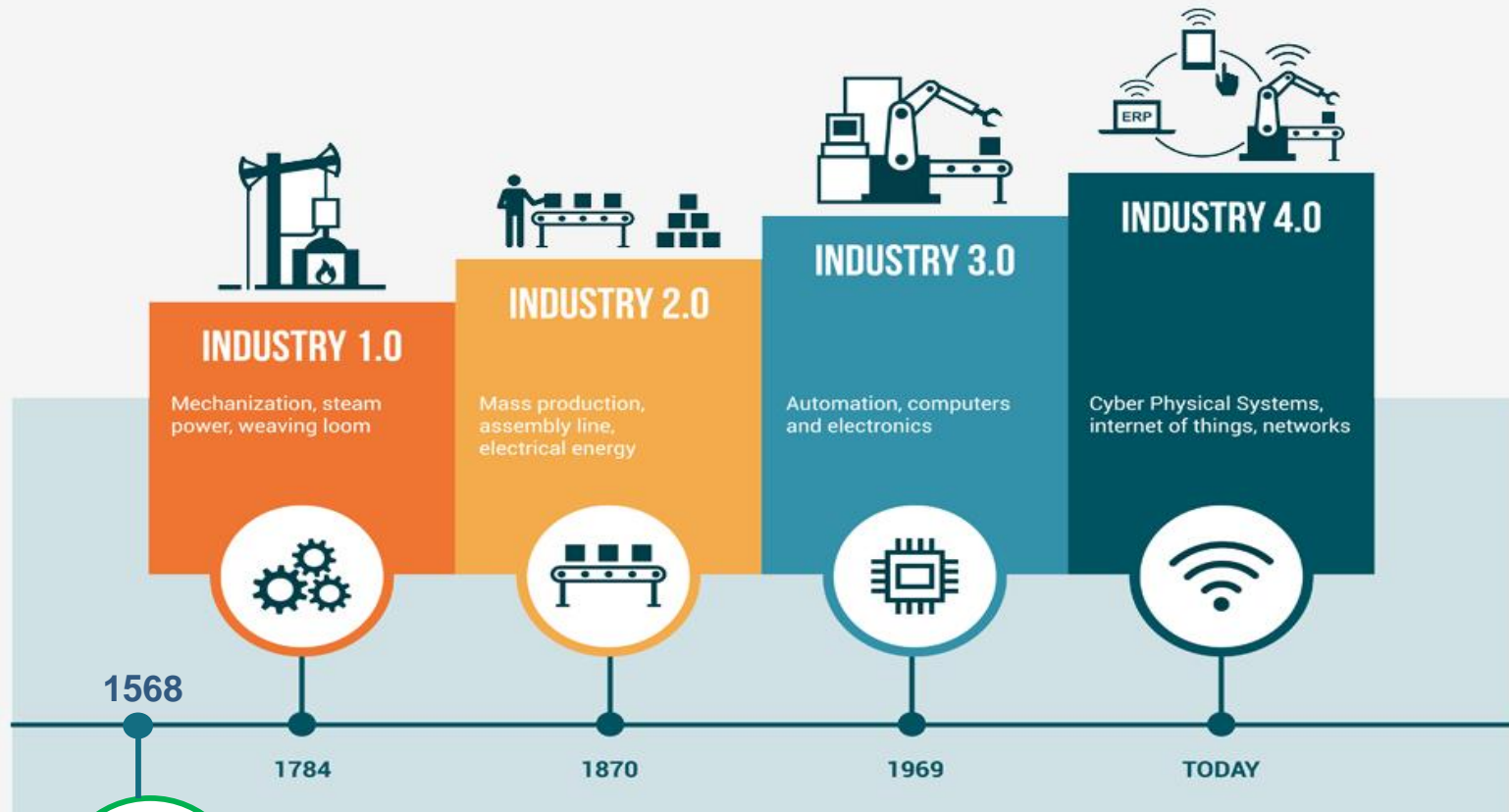


i-CAP

An *intelligent CAP* designed to indicate the status of a threaded bolt.

By Sadev Kalubowila,
Electronics and Telecommunication
Graduate,

Sri Lanka Technological Campus.





NTSB
SAFETY ALERT

Bolt And Nut Failure At The
Slewing Ring Of The Tower

Air
Esc



March 19th 2012 – An unfortunate death of a young man occurred when he was struck by a disengaged footboard of a train due to loosened bolt at Veyangoda ,



I-CAP

A cap which is specially designed to monitor the status of a threaded bolt and alarm the user when required. It has every need to monitor the failed bolt, alarm the user and locate it to the user.

MECHANISM



FIGURE 1

A well tightened bolt

i-CAP only shows

Luminous Green colour..

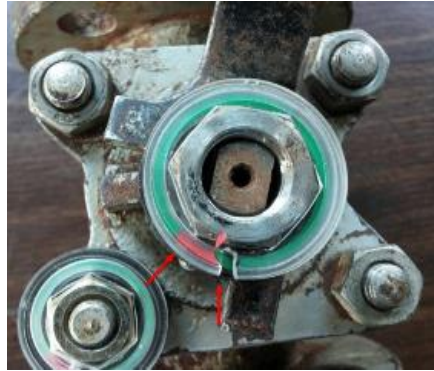


FIGURE 2

Initial loosening of the bolt

Note the **Luminous Red colour

DANGER



FIGURE 3

The bolt has loosened more.

Visible area of the **Red** colour has increased.

****DANGER****



FIGURE 4

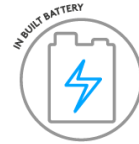
A high-risk bolt

Whole area becomes **RED** after complete loosening of the 1st round.

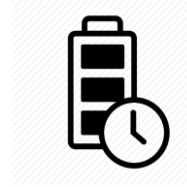
*****DANGER*****

i-CAP HUB

FEATURES



2 x AA Alkaline Battery



More than 475 days battery life



Multi-Sensing

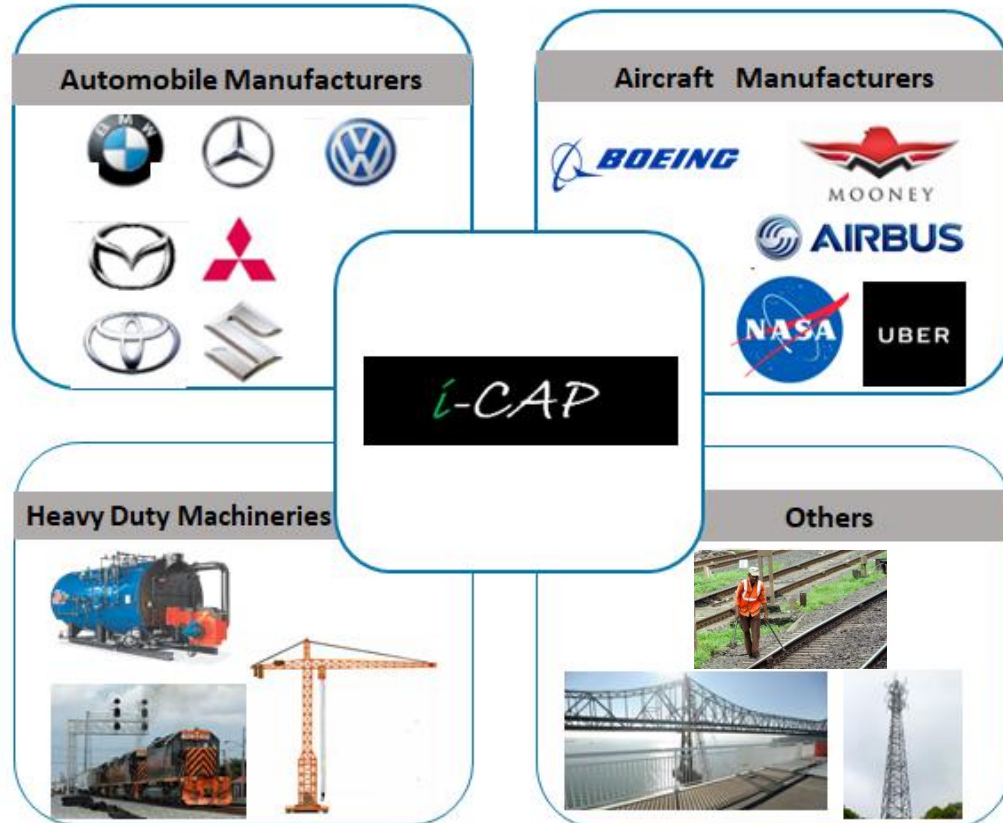


Wi-Fi



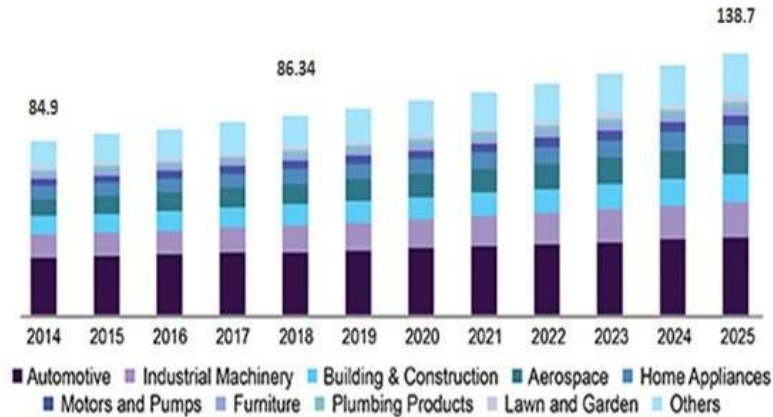
Dashboards

INTERESTED PARTIES



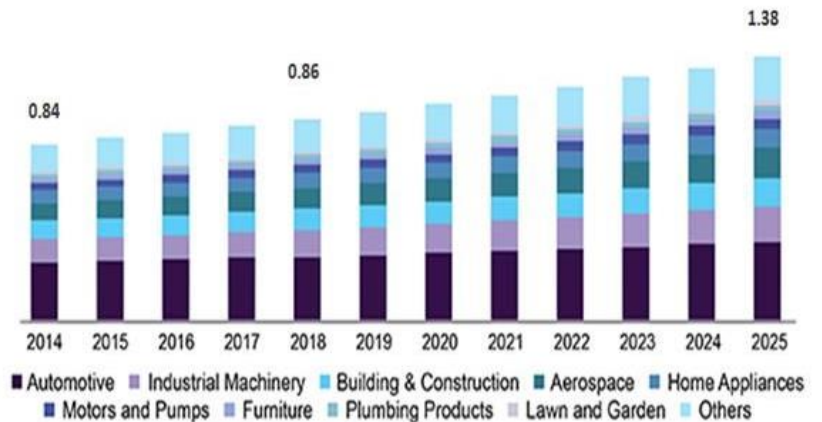
MARKET SIZE

Global available market on fasteners , by application, 2014-2025(USD Billion)



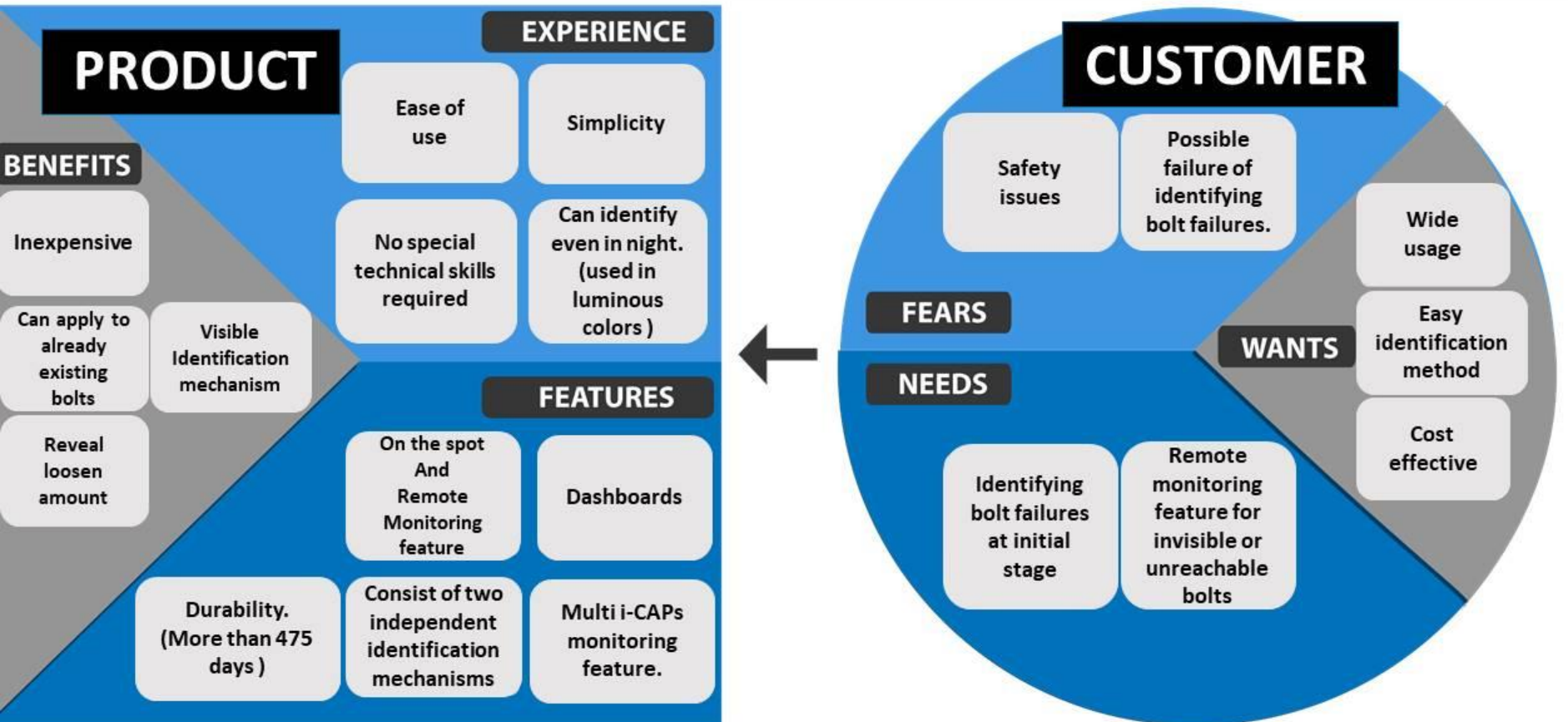
Source: www.grandviewresearch.com

Serviceable available market on i-CAPs , by application, 2014-2025(USD Billion)



Serviceable available market = Global available market x 1%

Value Proposition Canvas



THANK YOU



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