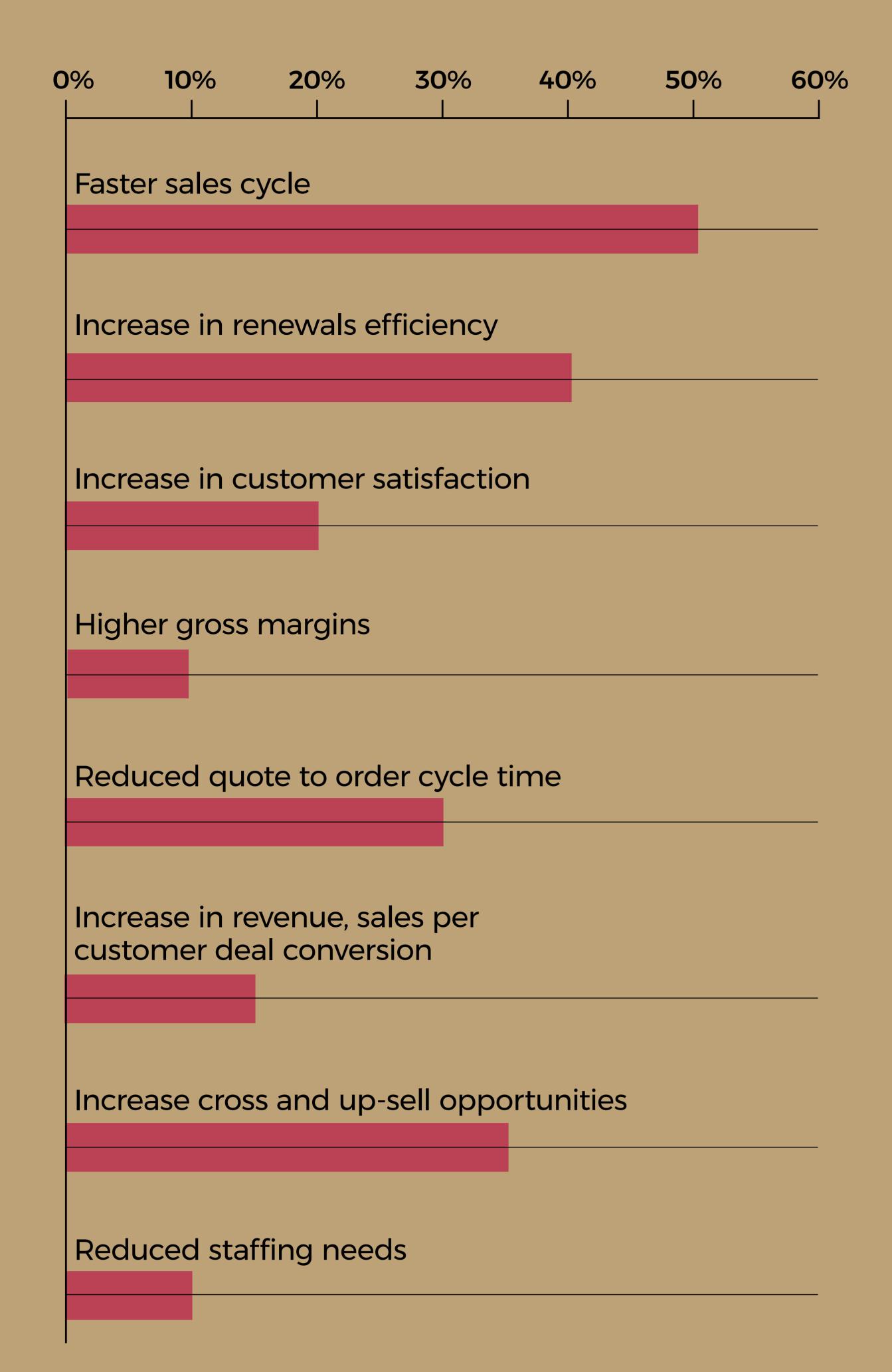
Manufacturing 2020

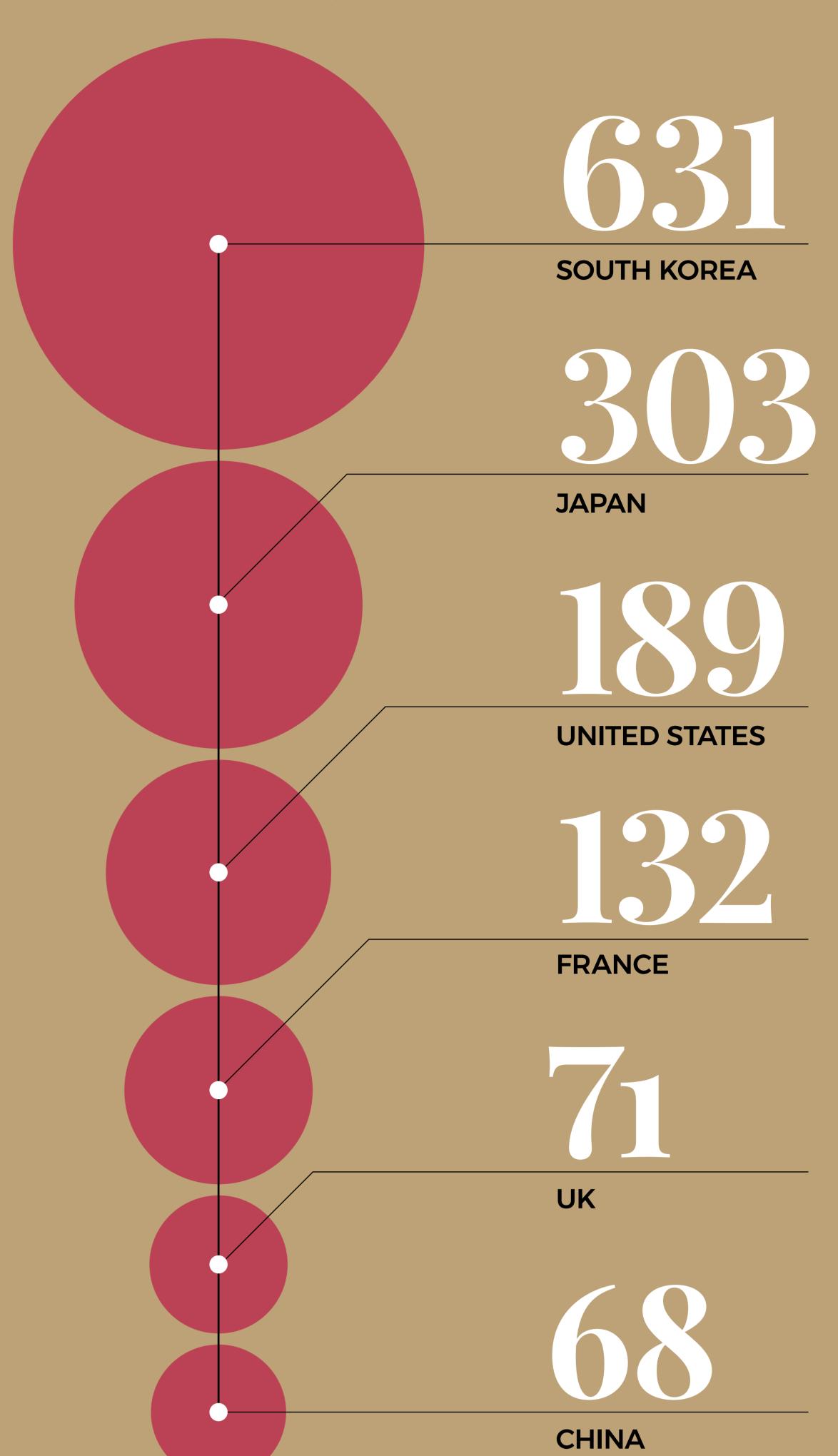
Manufacturing is undergoing a revolution as advanced connectivity and big data unleashes a new wave of innovation. The upheaval is not confined to the factory floor - business models are also in flux as manufacturers get new insights into how their products are used and repackage products into services

WHAT BENEFITS DO COMPANIES EXPERIENCE FROM INDUSTRY 4.0 PROJECTS?



WHERE ARE THE ROBOTS?

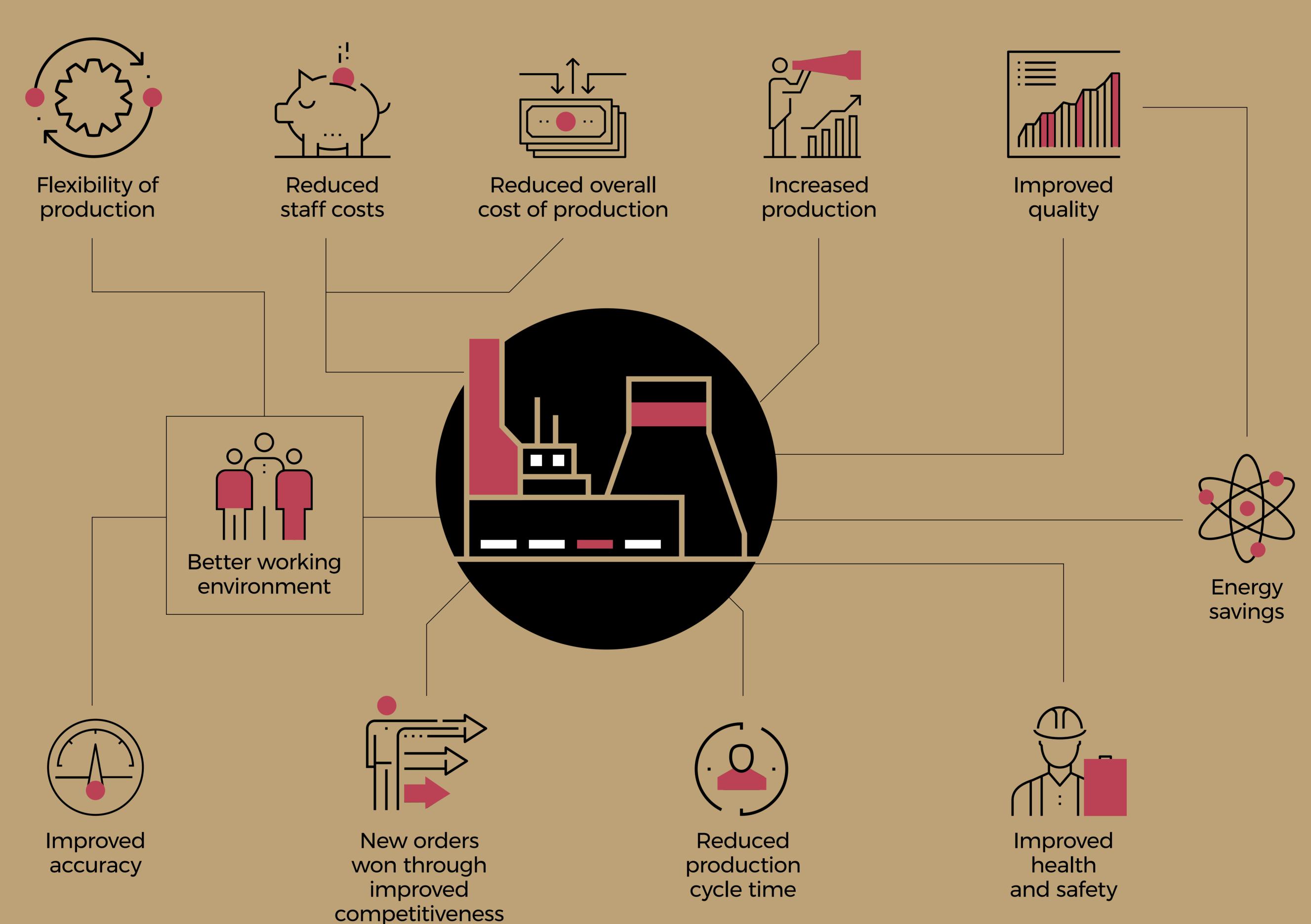
(MACHINES PER 10,000 MANUFACTURING JOBS)



International Federation of Robotics

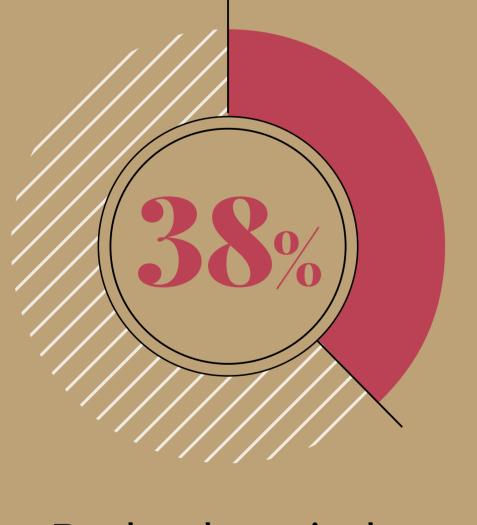
PwC 2017

WHAT BENEFITS DO COMPANIES EXPERIENCE/EXPECT FROM FACTORY CONNECTIVITY?

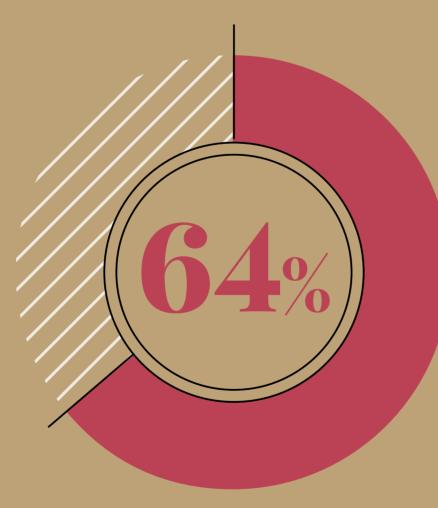


Columbus/*The Manufacturer* survey

WHAT ARE THE CONCERNS REGARDING IMPLEMENTING OR CONTINUING TO USE FORMS OF CONNECTIVITY?



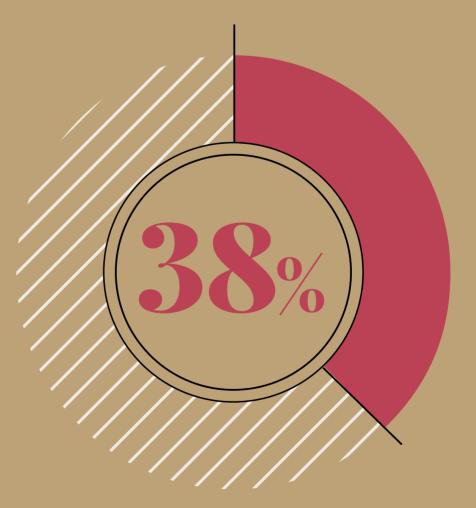
Payback period is too long or too uncertain



Initial development costs are too high



Lack of expertise



Cybersecurity

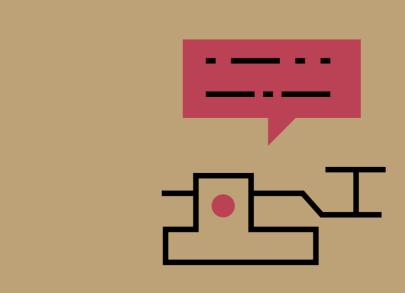


Difficult defining business case

Columbus/*The Manufacturer* survey

WHAT IS THE 4TH INDUSTRIAL REVOLUTION?

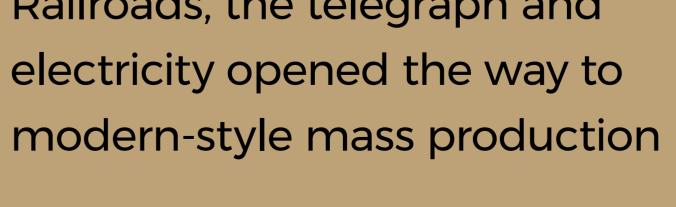
17608



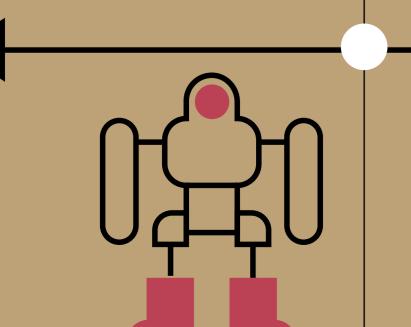
First industrial revolution Human muscle was replaced with

iron machines, initially powered by water and then by steam engines

Second industrial revolution Railroads, the telegraph and

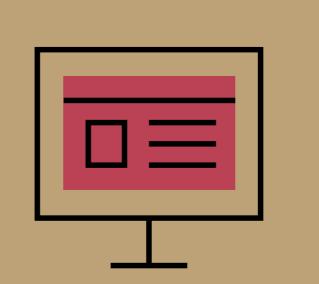


20105



Fourth industrial revolution

Robots and sensors connect via the internet of things to flexibly serve connected customers



19808

Third industrial revolution

Analog and mechanical
devices are replaced by
digital controls