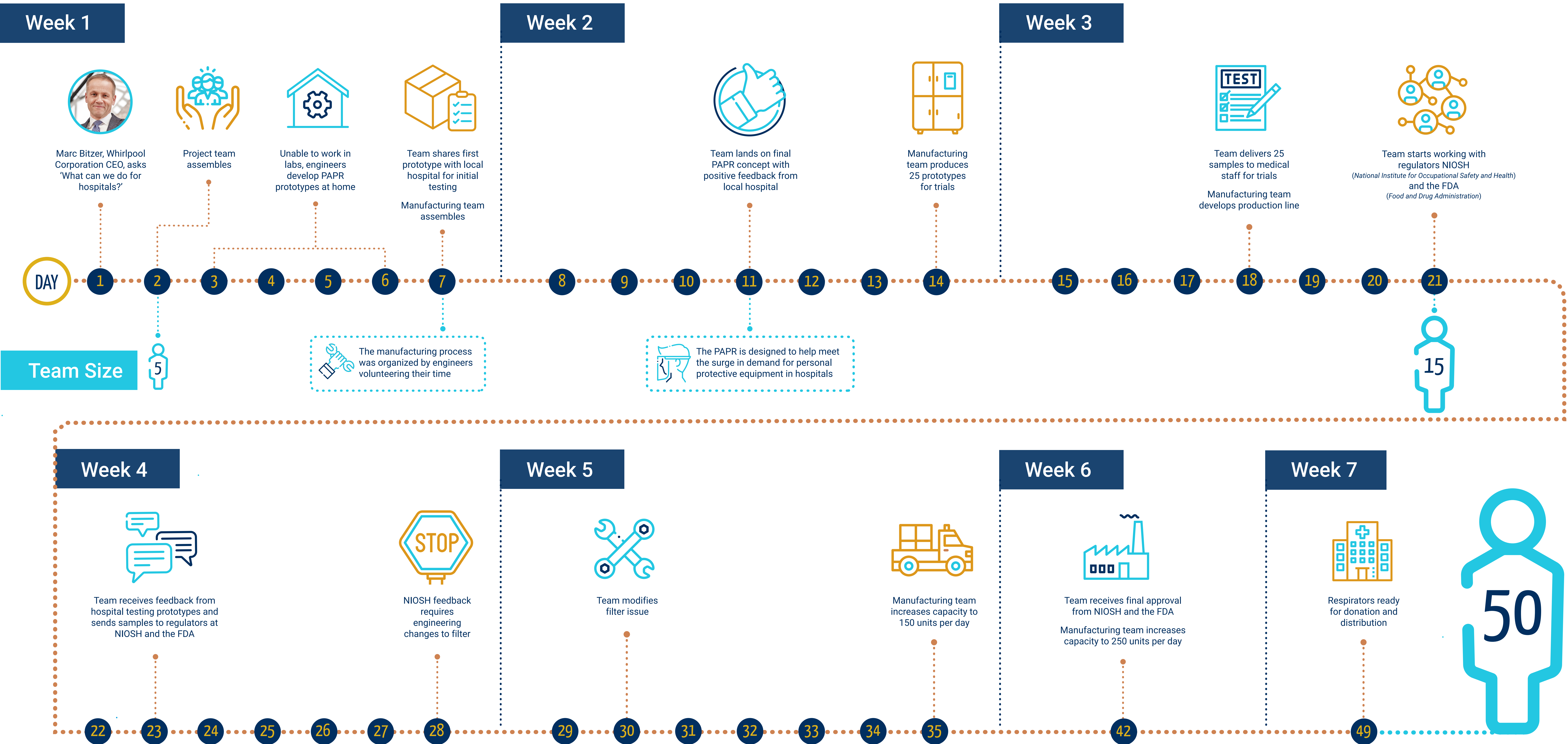


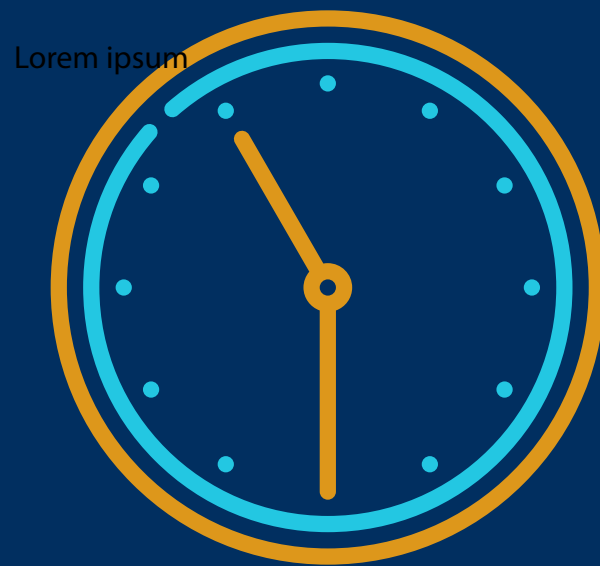
From Paper to PAPR: Life-Saving Innovation in Seven Weeks



Whirlpool Corporation, committed to helping hospitals tackle COVID-19, developed a powered air-purification respirator (PAPR) for frontline workers



From Paper to PAPR: Life-Saving Innovation in Seven Weeks



Whirlpool
CORPORATION

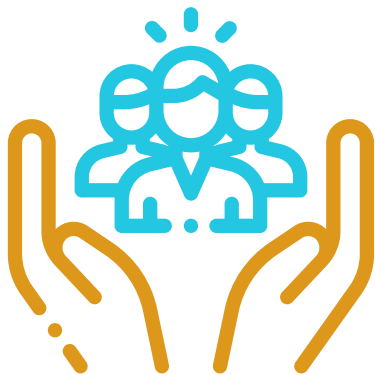
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Week 1



Marc Bitzer,
Whirlpool
Corporation CEO,
asks ‘What can we
do for hospitals?’



Project team
assembles



Unable to work in
labs, engineers
develop PAPR
prototypes at home



Team shares first
prototype with local
hospital for initial
testing

Manufacturing team
assembles



1

2

3

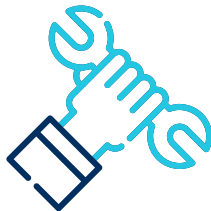
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Team Size

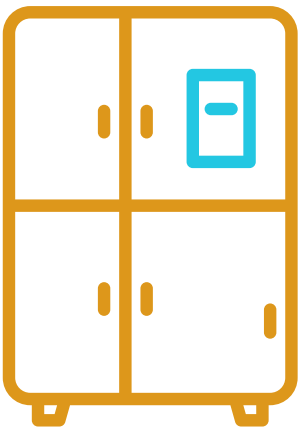


The manufacturing process
was organized by engineers
volunteering their time

Week 2



Team lands on final PAPR
concept with positive
feedback from local
hospital



Manufacturing
team produces
25 prototypes
for trials

8

9

10

11

12

13

14

Week 3



Team delivers 25 samples to medical staff for trials

Manufacturing team develops production line

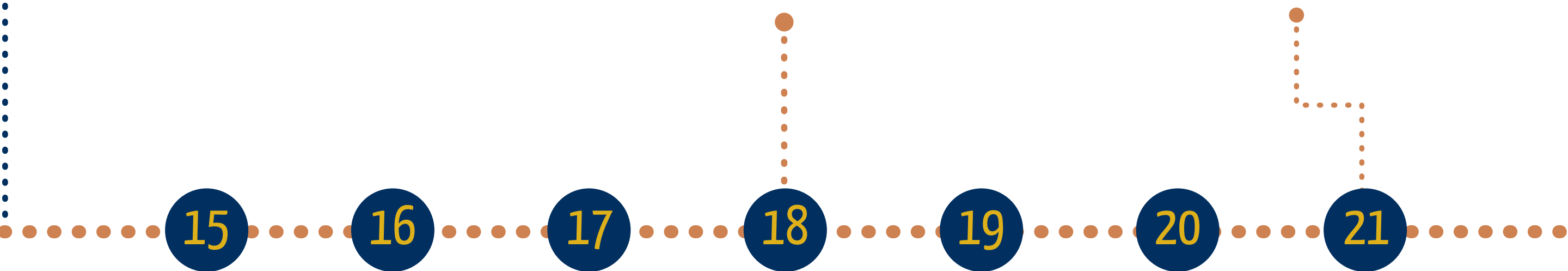


Team starts working with regulators NIOSH

(National Institute for Occupational Safety and Health)

and the FDA

(Food and Drug Administration)



Team Size



Week 4



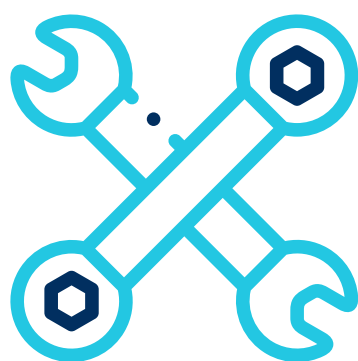
Team receives feedback from hospital testing prototypes and sends samples to regulators at NIOSH and the FDA



NIOSH feedback requires engineering changes to filter



Week 5



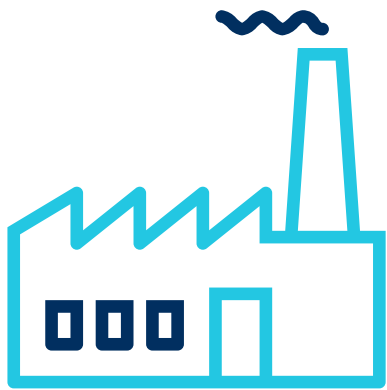
Team modifies
filter issue



Manufacturing
team increases
capacity to 150
units per day



Week 6



Team receives final approval
from NIOSH and the FDA

Manufacturing team increases
capacity to 250 units per day

42

Week 7



Respirators ready
for donation and
distribution

49



Team Size

The PAPR is designed to help meet the surge in demand for personal protective equipment in hospitals

