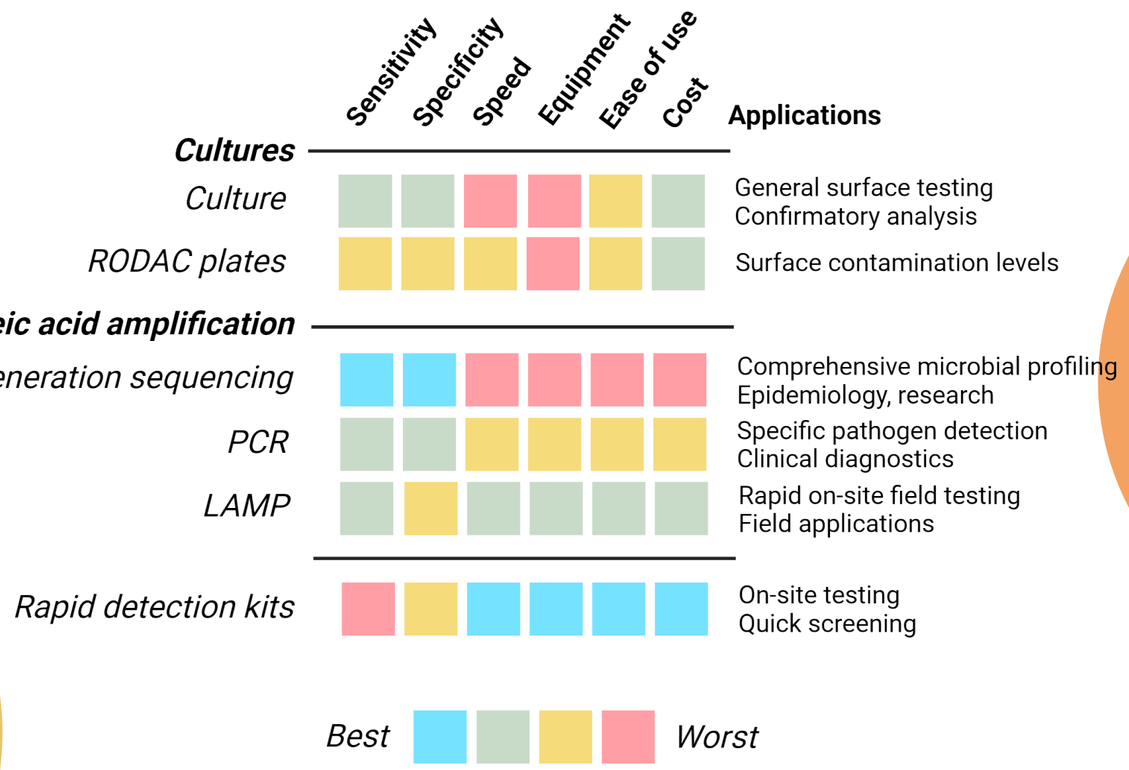
Aptasense

Rapid detection of MRSA on hospital surfaces

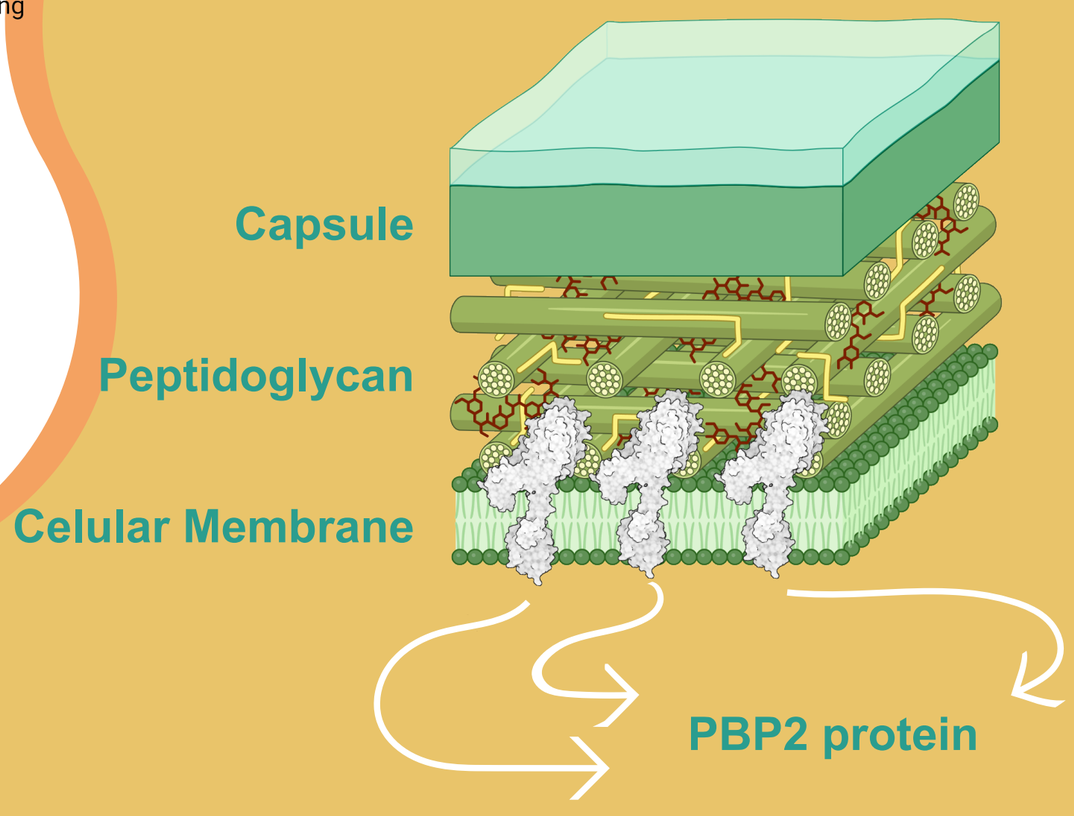
The problem

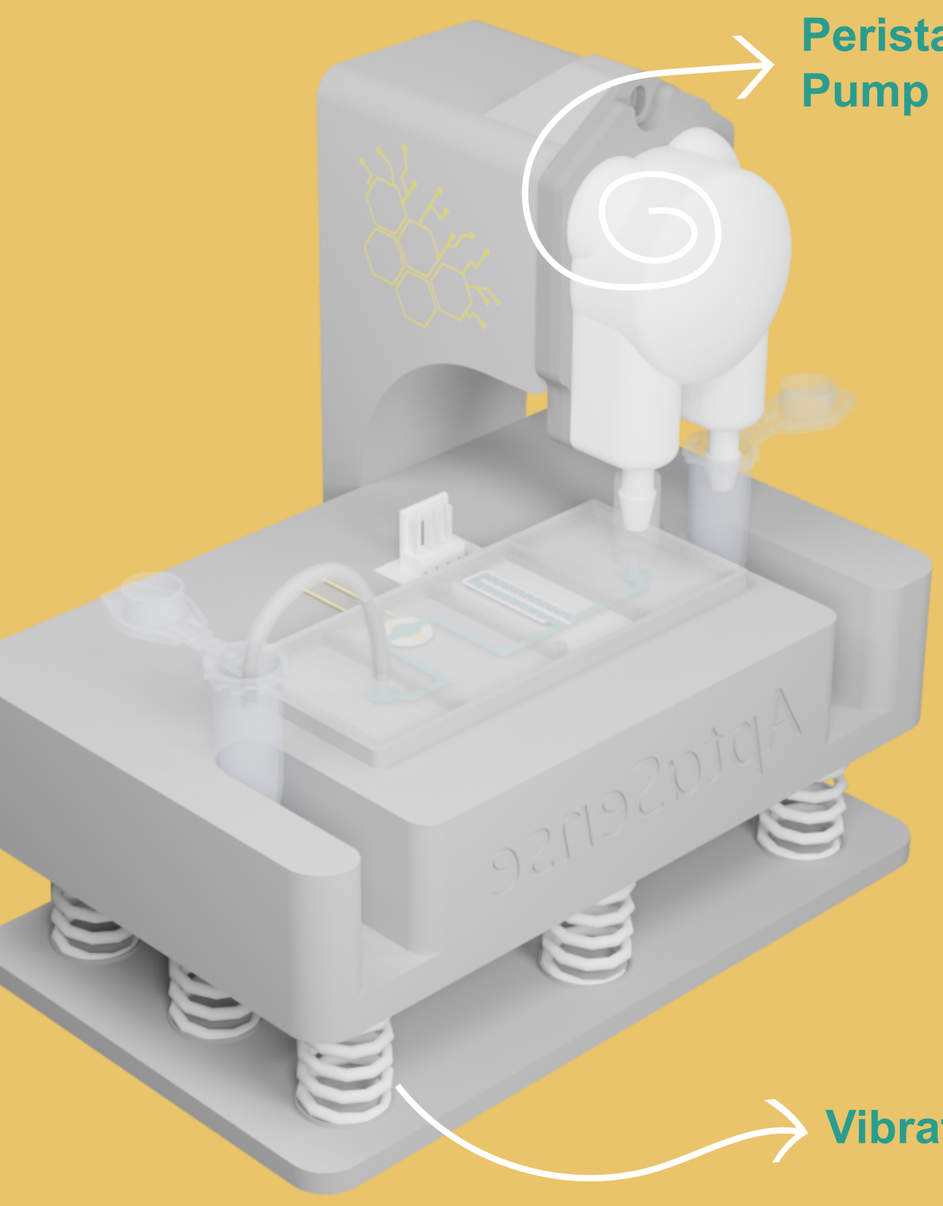
Current detection systems either achieve high sensitivity and specificity or perform well in terms of speed, cost, and ease of use. Hospitals require a quick and affordable test that allows daily monitoring of Methicillin-resistant *Staphylococcus aureus*.



Methicillin-resistant Staphylococcus aureus

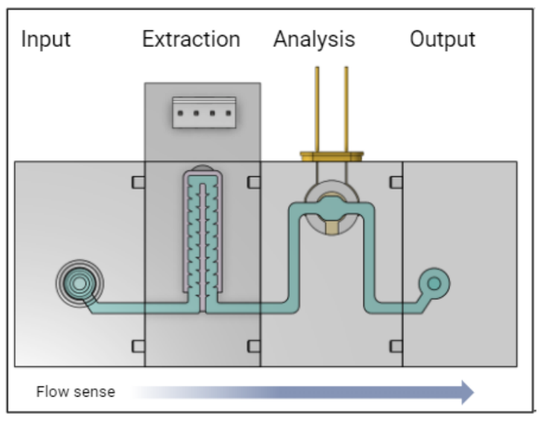
Methicillin normally works by stopping bacteria from making their cell walls, but MRSA bacteria have a special protein, PBP2a, that allows them to bypass this blockade and keep building the cell wall, leading to resistance.





Our solution: AS 4.2

2-stage microfluidic chip



1 Sonication-based cell lysis

2 Aptamer bioactivated QCM

With reusable chips!