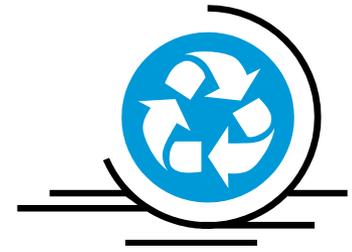


# Low Cost Checking

“a fixturing alternative that saves”

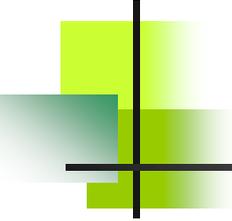




# Component Fixtures

- Component fixtures have traditionally been dedicated CMM holding fixtures used to prove process capability. Once PPAP is achieved, these fixtures are typically no longer needed unless a part issues arises.
- The necessity to store numerous dedicated fixtures becomes an issue as plant floor space is at a premium, which in turn leads to tooling being scrapped as soon as feasibly possible.





# Alternative solution

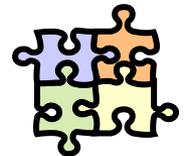
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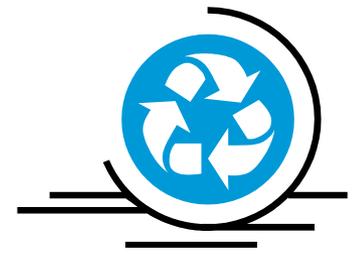
- As a result of the low usage of dedicated component fixtures, the increasing goal has been to reduce cost as well as waste. Tri-Star Engineering has developed a patent pending system to address both of these concerns.



# Re-usable Re-configurable

- A simple Checking Fixture System where the primary components are re-used and re-configured to accommodate part-unique details.
- The part-unique details are the only necessary dedicated fixturing required to check each component part of an assembly.
- The Re-usable Re-configurable (R/R) Fixture accepts the part-unique details to allow an operator to create an unlimited number of dedicated fixtures.

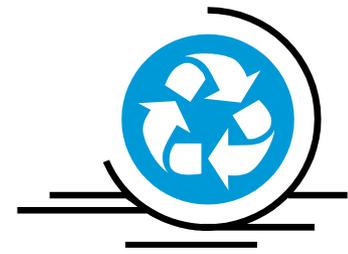




# The Basics

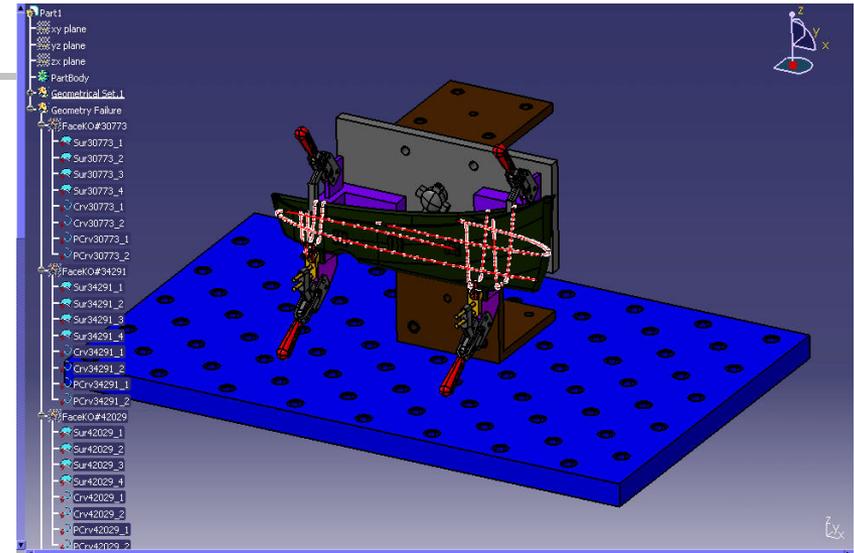
- The basic system consists of a series of Risers, Brackets, and Base Plates that will reside in the CMM room at the manufacturing plant.
- All components are manufactured using aircraft aluminum to exacting standards.

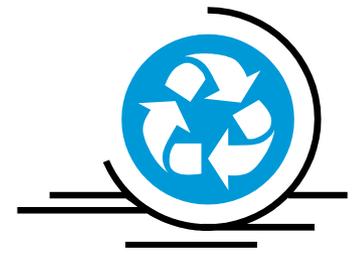




# How it works

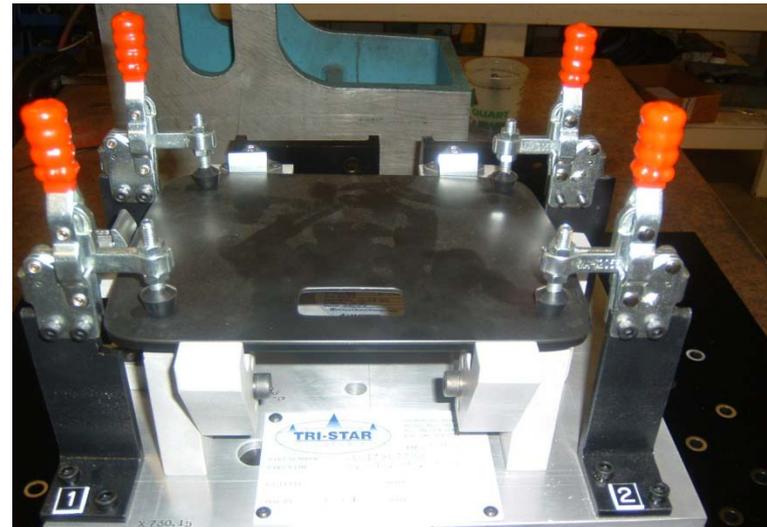
- Part-unique details are designed and built to plug into the basic system at the manufacturing plant using a 100mm grid pattern.
- Each detail is certified, packaged, and shipped to the plant for installation using simple instructions.

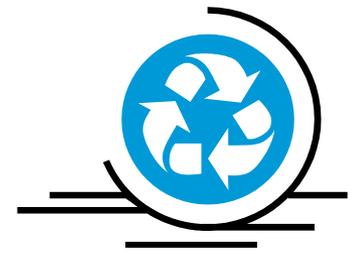




# Flexibility

- Multiple parts can be checked on one system as every detail has its own base start values.
- Detail set up only takes minutes.
- When not in use, the part-unique details can be safely stored for future part inspections.





# Cost Savings

- Console Bin was originally built using traditional methods at a cost of \$8,540.
- Console Bin part-unique details built using R/R for \$3,950.

