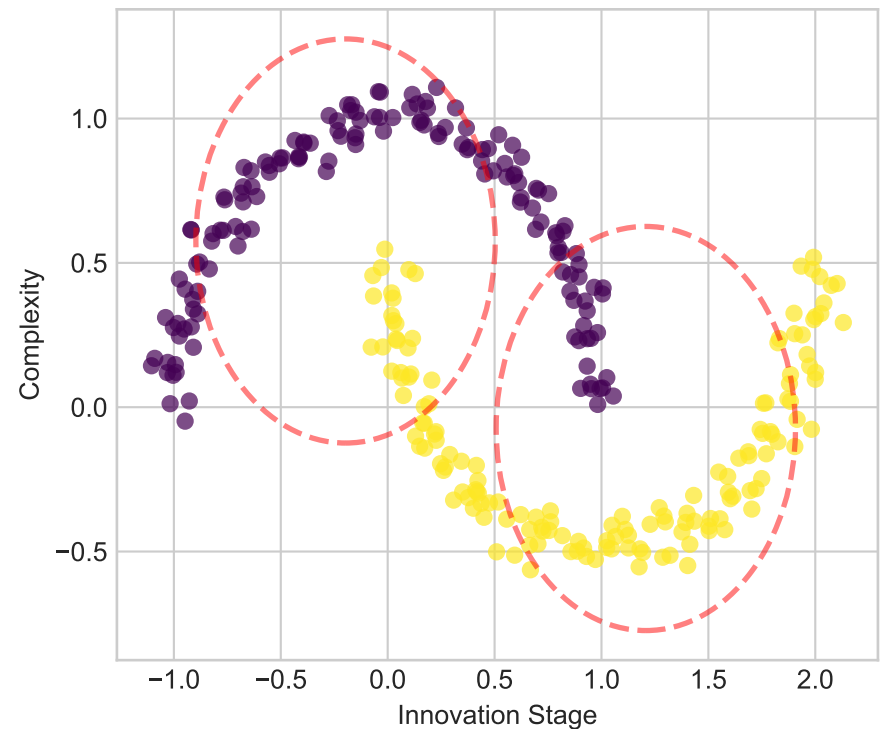
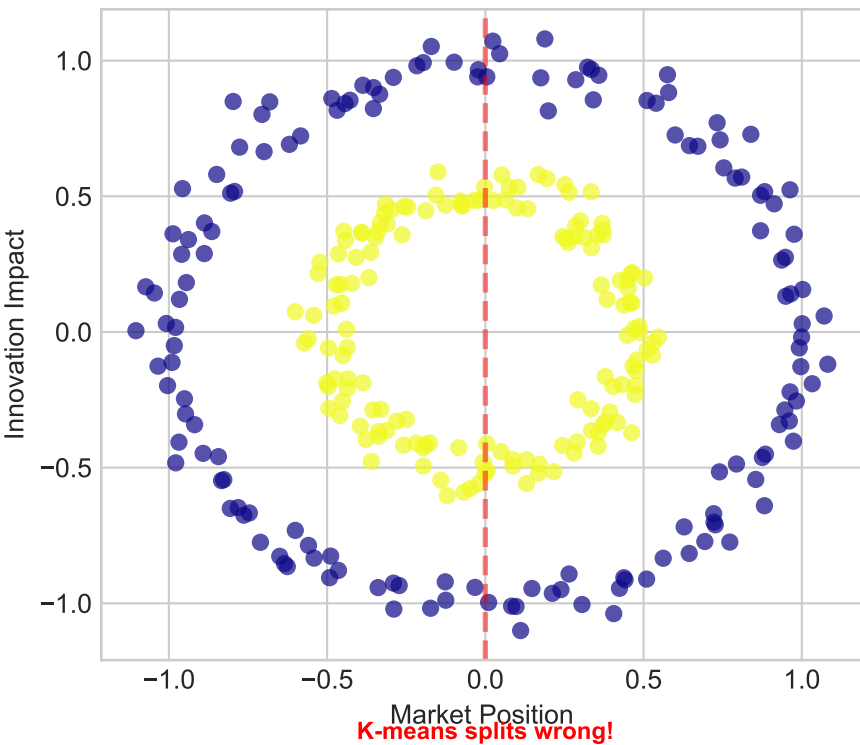


Where K-Means Fails: Non-Spherical Innovation Patterns

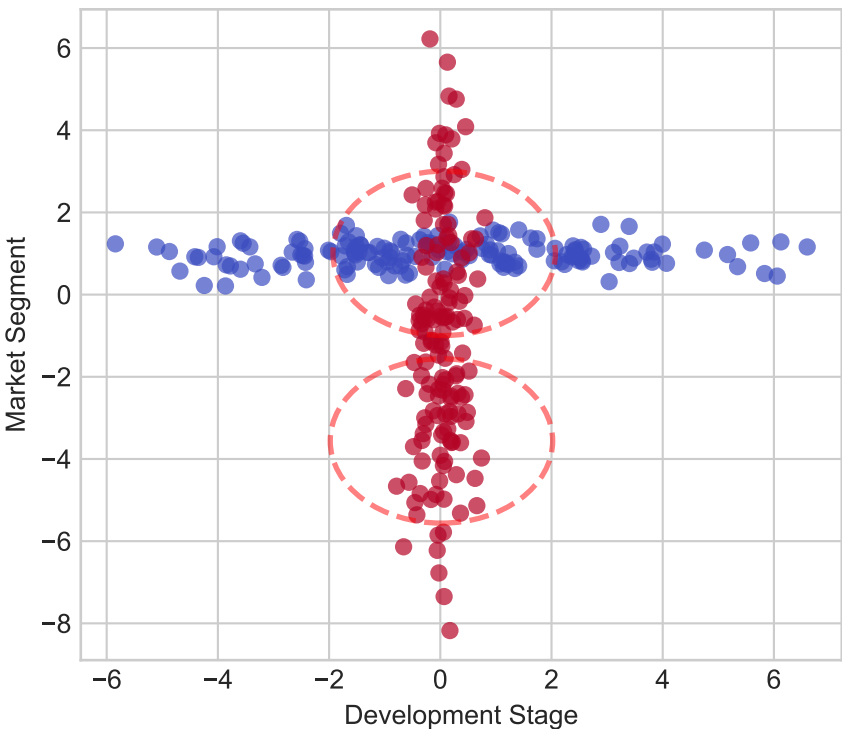
Crescent Shapes
(Technology Evolution Chains)



Nested Circles
(Core vs Peripheral Innovation)

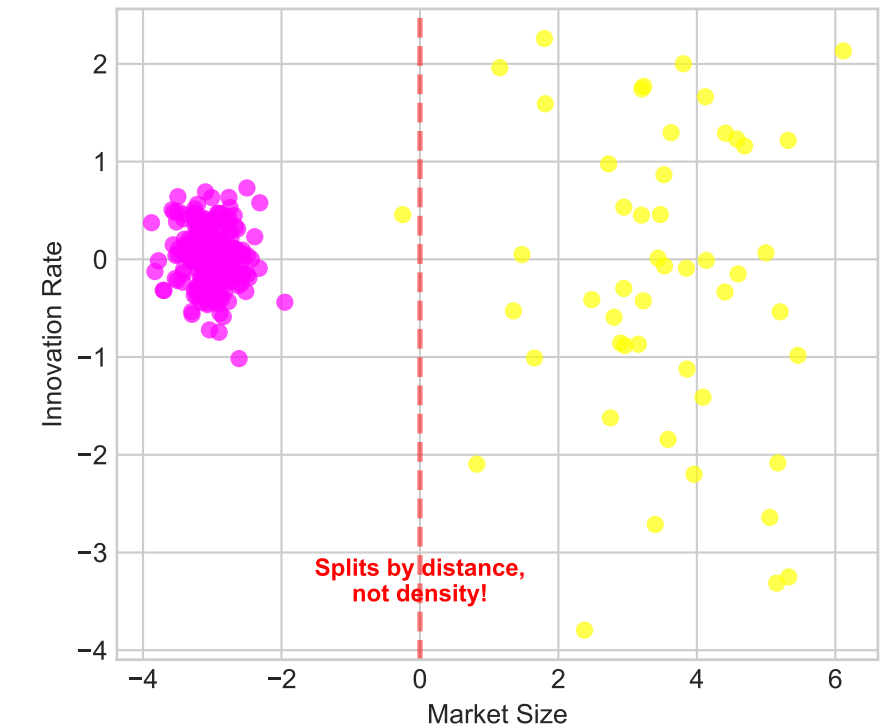


Chain Patterns
(Innovation Pipelines)

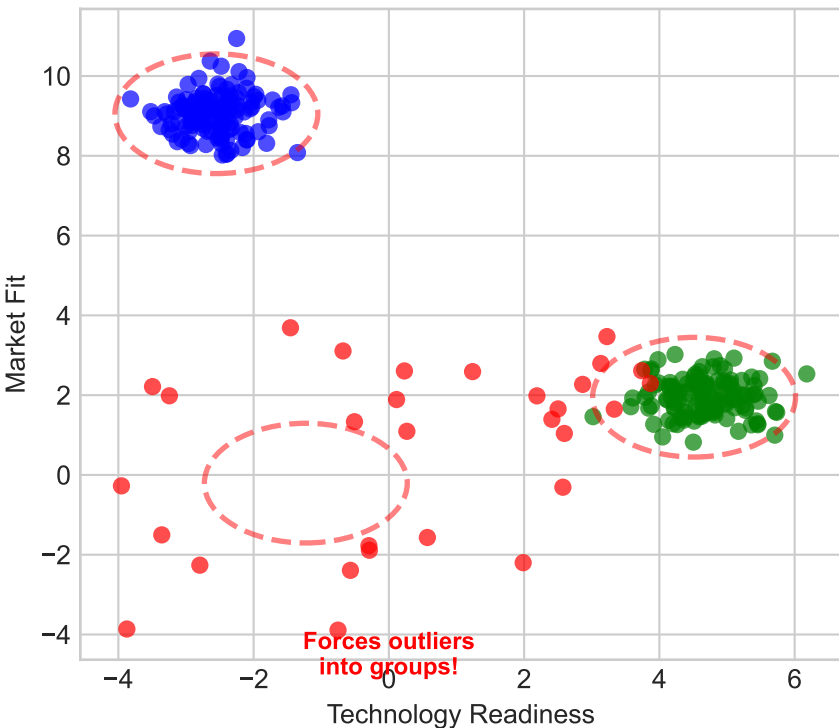


K-means tries circles!

Varying Densities
(Mature vs Emerging Markets)

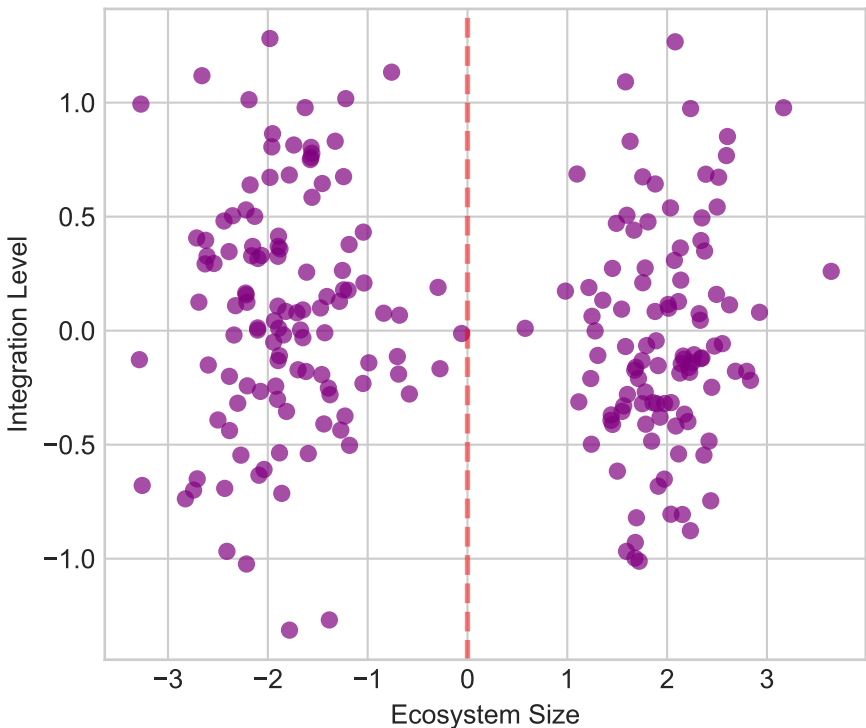


Clusters with Outliers
(Disruptive Innovations)



Forces outliers into groups!

Connected Ecosystems
(Platform Innovations)



Real innovation patterns rarely form perfect circles - that's why we need advanced clustering methods!