Objective
Improve the ability to predict and control microbial communities by developing a coordinated and unified conceptual framework to study microbiome dynamics across all systems.

New Science
This conceptual framework posits that factors influencing the temporal dynamics of microbiomes be grouped into three broad categories: biotic and abiotic historical conditions, microbial community internal dynamics, and external environmental forces.

Significance
● Providing an integrated view of the factors driving microbiome dynamics allows scientists greater crosstalk between research domains and opportunities for discovering data connections and information gaps.
● Understanding microbiome responses to change can be used to engineer optimized microbial communities for improved environmental and human health.