

System Engineering

20.109(F11)
 M2D2 lecture
 10.18.11

Technology as simple as the box it comes in...

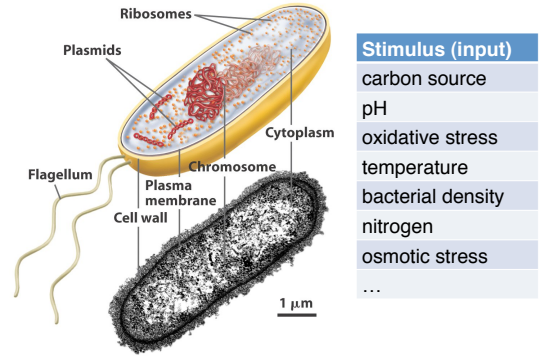


Figure 7-1 Biological Sciences, 2/e © 2005 Pearson Education, Inc. http://www.dropclick.com/practestian1anssheet_files/slide0022_image001.jpg

Technology as simple as the box it comes in...

Stimulus (input)	Response (output)	2CS (2?)
carbon source	motility, chemotaxis	CheA/CheY, CheB
pH	stress, virulence	PhoP/PhoQ
oxidative stress	superoxide dismutase	
temperature	heat shock protein syn	
bacterial density	quorum response	LuxN,Q/LuxO
nitrogen	metabolic changes	NRI/NRII
osmotic stress	uptake/output changes	EnvZ/OmpR
...		

“Two Component Signaling (2CS)”
 for many --- not all---responses

The 2CS paradigm: in general

