I’m going to show you how multicell thunderstorms sustain themselves, and do to that let's assume that an idealized multicell thunderstorm is already in progress, shown here. To get your bearings, this schematic shows a cross-section of the structure of an ongoing multicell cluster. Individual thunderstorm cells are numbered, and black arrows indicate updrafts and downdrafts. The gust front is marked by this blue boundary here. The clock measures elapsed time, and is currently set to zero. At our starting point, individual single-cell thunderstorms are in various stages of development. Cell #1 is already in its dissipating stage and is dominated by downdrafts. Cell #2 has reached maturity, and Cells #3 and #4 are at various points in the cumulus stage.

After ten minutes, the gust front initiates new “cells” where it lifts warm, moist air that becomes positively buoyant. As each thunderstorm matures, it replaces the adjacent dissipating storm farther downstream. For example, Cell #3 has replaced Cell #2 as the mature single cell at this point. Cell #3 is in the mature stage because it has both updrafts and downdrafts, while there's only downdrafts in Cell 2. With the restrained gust front continuing to systematically initiate new storms, the stage is set for a long-lived, organized multicell thunderstorm.

After 20 minutes elapses, Cell 3 has reached the dissipating stage and is overcome by downdrafts, while Cell 4 is approaching the mature stage, with Cell 5 waiting in line as it starts to develop along the restrained gust front. There’s a growing bundle of precipitation suspended aloft by the updraft with no discernible downdraft, so it’s in the cumulus stage. As long as new storms can keep initiating along the restrained gust front, this process can continue for hours as new cells form along the gust front and older cells dissipate.

Granted, these cross sections are idealized and things in the real atmosphere don't always look so nice and tidy. But, the bottom line is that, in contrast to single-cell convection, the gust front associated with a multicell thunderstorm repeatedly initiates new cells, which often happens on the storm’s southwest flank.