Do networks plentiful in ideas provide startups with performance advantages? On the one hand, network positions that provide access to a multitude of ideas are thought to increase team performance. On the other hand, research on network formation argues that such positional advantages should be fleeting as entrepreneurs both strategically compete for the most valuable network positions and form relationships with others who have similar characteristics and abilities. I embed a field experiment in a three-week-long startup bootcamp and pre-accelerator to test if networks plentiful in ideas lead to performance advantages. Using detailed data from the bootcamp’s custom designed learning management platform, I find support for this hypothesis. Teams with networks more plentiful in ideas receive better peer evaluations and more crowdfunding page views. I find little evidence that entrepreneurs actively build networks to alters who could have provided a greater quantity of information and ideas. Instead, entrepreneurs seek feedback from those they have collaborated with in the past or who share similar ascriptive characteristics. These findings provide first-order evidence for the importance of knowledge spillover within bootcamps, incubators, and accelerators. Furthermore, the findings provide a potential explanation for the durability of idea and information based network advantages.