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Viewpoint: AI can help investors pick winning startups



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Big data and artificial intelligence are about to transform yet another industry: startup investing. And why not, the stakes are high and the science has been proven on many other human activities equally complex.

Venture capital and angel investing is a game of numbers. A confident team of entrepreneurs stands before a seasoned panel of investors, ready with a pitch and a slide deck. It happens hundreds of times a year, with investors reviewing as many as 50 pitches a week. Most business plans are digested, on average, for three minutes and 44 seconds each.

Venture capitalists have deployed \$69 billion across 7,751 companies in America, according to the Venture Monitor for the fourth quarter of 2016. Angel investors, the VC's early-stage counterparts, have invested over \$24.6 billion. Everyone that invests in early-stage ventures understands that looking into the future is difficult, as measured by the fact that 90 percent of startups fail. Startup founders don't want to put their hopes, toil, and personal wealth into a dud, either.

Looking into the future by reading a well-written plan is notoriously difficult even for the brightest and most savvy investor. We have always said, bet on the management team,

not the plan. Even so, most early-stage investments go south, taking dollars and dreams along for the ride to oblivion.

Everyone would like a more precise way to model and predict the future success of a business plan. My latest research – together with professor, investor and entrepreneur Gary Cadenhead – explores the prediction of business plans; those documents created by entrepreneurs to enhance their ability to secure funding for their venture. We worked in collaboration with a team from PredictionWorks Inc., a company that has been pioneering new venture predictive analytics. CEO Mark Long and Chief Operating Officer Chip Adams gave us access to their system which while being manually operated will soon integrate a novel approach to rules-engine technology and AI machine learning languages allowing investors to predict which business plans will be successful.

Imagine with me the ability to predict business plans; the ability to radically move the needle on forecasting the success rate of startups – including new-to-the-world product ideas or acquisitions that evolve out of the corporate sector – from 10 percent to 95 percent. Dr. Cadenhead and I worked as academic research/grant administration partners to test and verify the success of the PredictionWorks Venture Assessor model in two major innova-



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tion regions, Silicon Valley (10 tests) and Austin (nine tests). Utilizing a battery of blind validation tests of business plans from the past, data was collected and assessed to determine if the plans were a high-growth success or a failure. With an N of 10, the model was able to correctly predict 100 percent of the business plans tested in Silicon Valley and 90 percent of the nine tests in Austin. The test results for both Silicon Valley and Austin are posted on the IC² Institute website and at prediction-worksinc.com.

If the proof of reliability earned in these two batteries of tests is any indication, the future of investing will be dramatically different. That future will be grounded in rules engines and learning algorithms, with the potential ability to assess and score a limitless number of new venture or new product business plans, each one in minutes or seconds rather than hours. As noted by Adams, "The key to the success of our approach is that we remove the subjectivism from assessment and with our scoring system have an objective, scientific analysis that not only serves investors but entrepreneurs as well."

With such tools available to those in the innovation assessment game, the future will look brighter for both sides of the ledger, meaning investors and the business people who are creating companies to secure our future.