Students at Carnegie Mellon’s Integrated Innovation Institute
Tackle Acquaintance/Date-Rape Crisis with Marketable Solutions

Mobile-technology prototypes shift focus to bystander students, encouraging intercession
#InnovateAgainstRape social-media launch invites ideas for products and services

PITTSBURGH, July 30, 2014 – Amid increasing reports of sexual assaults among college students, the Integrated Innovation Institute at Carnegie Mellon University is applying its distinctive innovation approach to accelerate marketable solutions to combat acquaintance/date rape. Two novel product prototypes, targeted to the college population and designed by graduate-student teams, employ mobile technology to galvanize bystander intervention and engender shared community responsibility.

The products, coined SPOT (A Problem) and NightOwl, are emblematic of the Institute’s continued mission to sponsor projects with a social purpose. In this case, the Institute ultimately seeks to help reverse what some students, lawmakers and others have deemed a “pervasive rape culture” in America, especially at the university level. Carnegie Mellon has filed provisional patents on both prototypes on the students’ behalf.

Of the roughly 12 million women enrolled in American colleges and universities, an estimated 20 to 25 percent, approximately three million, will experience rape or attempted rape.1 Intimate partners or acquaintances perpetrate between 80 and 90 percent of such attacks,2 with the majority committed by men. For myriad reasons that are widely debated, including the role of intoxication, fewer than one in 20 attacks are reported3 and those that are have proved difficult to prosecute.

“Finding solutions to on-campus sexual assaults is as complicated as the issue itself and education-focused efforts need to be amplified with action-based solutions,” said Institute Co-Director Eric Anderson, an associate professor in the School of Design and associate dean of the College of Fine Arts “Those emerging from among the affected demographic may hold the most promise to engage peers and resolve the situation."

Institute students addressed the problem of acquaintance/date rape as a market challenge – an unmet need – from a product development perspective, according to Institute Executive in Residence, Donna Sturgess.

“They asked, what would be effective with this demographic? What could motivate action in an environment where social challenges may prevent someone from interceding?” said Sturgess, who oversaw the projects and is also president and founding partner of Buyology Inc., and former global head of innovation at GlaxoSmithKline.

Employing the Institute’s hallmark integrated-innovation methodology, graduate-student teams with engineering, design and business backgrounds developed the prototypes as part of their capstone projects underwritten by the Institute. Through extensive research they found: 1) most current solutions put the onus of prevention on potential victims making them susceptible to blame; 2) education efforts aimed at potential perpetrators are slow to spur social change; and 3) while bystanders may be best able to prevent attacks, people are hesitant to intercede, either from fear of consequences, lack of confidence in their assessment of the situation or an assumption that others will act.

Carnegie Mellon’s Interim Provost Nathan Urban calls this a “critical moment” as universities across the country confront this issue. “We are extremely proud to see potential solutions to this nationwide problem developed here at the Integrated Innovation Institute. Products such as NightOwl and SPOT could provide students and administrators with tangible but simple means to collectively reduce sexual misconduct. They represent an important first step toward changing student attitudes and reducing the incidence of rape, on campus and off.”

Generally, university-led efforts to address sexual violence have focused primarily on education programs and working with fraternities, sororities and clubs to curb binge drinking, hazing and other risky behaviors. However, no clear solution has emerged to fully prevent sexual crimes on campus.

“We are taking a long view of finding ways to ‘innovate against rape,’ with other potential solutions to follow,” said Jonathan Cagan, a Co-Director of the Institute, the Ladd Professor of Mechanical Engineering and director of Innovation and Entrepreneurship in the College of Engineering. “Our approach at the Institute offers fresh, cross-collaborative thinking that has led to two viable, action-based tools intended as complements to continuing educational efforts and other solutions underway on college campuses.”

**Products designed for a specific demographic**

Understanding that the peak rate of victimization occurs in the 16-19 year-old age group, followed by those aged 20-24, the student teams explored solutions that would be comfortable for the demographic – meaning inherently unobtrusive and inconspicuous from a social adoption standpoint – yet be effective as tools for interceding. The resulting prototypes:

- **NightOwl** is a social (peer-to-peer) mobile application that provides users with an anonymous way to report dangerous situations at social events. A temporary, location-based messaging platform, it encourages social sharing of music playlists and pictures – features aimed at increasing implementation – while simultaneously promoting shared responsibility to look out for other partygoers’ safety. Users can report potentially harmful behavior in their own words or via preset messages directly to the host or to other attendees – for instance, a friend of a guest who may be at risk – enabling swift and effective action.

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4 The Women’s Center, Inc.
SPOT (A Problem) combines an integrated mobile application and wristband, and seeks to incentivize fraternities to exercise collective responsibility for keeping events safe. Based on a crowd source feedback system, event guests use the application to send information about aggressive or unsafe behavior in real time to fraternity-designated risk managers who receive messages via an associated wristband that vibrates and emits visual (light) alerts. Incentives for adoption include reduced assaults and improved reputation – both of which are linked to lower fees, dues and insurance costs (an added benefit).

The student inventors envision modifications to make the products useful in other venues, such as bars, concerts and large student group/professional organization events.

To spur public discussion the Institute has also established a dedicated “Innovate Against Rape” website, Twitter feed and Facebook page, where visitors are encouraged to share their ideas for new products and services that could prevent sexual violence. Sturgess said the bold logo for #InnovateAgainstRape, with its toppled letter A, signifies the Institute’s mission to help mitigate the problem of sexual assault.

“No single entity can solve this issue, but the combined efforts and skill sets of nonprofits, businesses, academic institutions, activists, social organizations and others can help end sexual assault by addressing it from all angles,” said Peter Boatwright, a co-director of the Institute, and the Carnegie Bosch Professor of Marketing at the Tepper School of Business. “We look forward to engaging with other concerned groups as the Institute continues to pursue resolutions to this vexing societal problem.”

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About The Integrated Innovation Institute at Carnegie Mellon University
The Integrated Innovation Institute, formally launched this year, is a joint initiative of the College of Engineering, the College of Fine Arts and the Tepper School of Business. The Institute is built on primary disciplines in product and service innovation covering functional performance (engineering), human interface (design), and economic value (business). The Institute focuses on education and research in innovation methods and practice and is unique among top educational institutions in that it unites the three disciplines to cross train students to become elite innovators, enhancing the effectiveness of thinking and generating results. The Institute confers professional master degree programs, conducts proprietary applied research, and extends its training through executive education, customized company programs and open-enrollment consortia.

About Carnegie Mellon University: Carnegie Mellon is a private, internationally ranked research university with programs in areas ranging from science, technology and business, to public policy, the humanities and the arts. More than 12,000 students in the university's seven schools and colleges benefit from a small student-to-faculty ratio and an education characterized by its focus on creating and implementing solutions for real problems, interdisciplinary collaboration and innovation. A global university, Carnegie Mellon has campuses in Pittsburgh, Pa., California's Silicon Valley and Qatar, and programs in Africa, Asia, Australia, Europe and Mexico.