



b

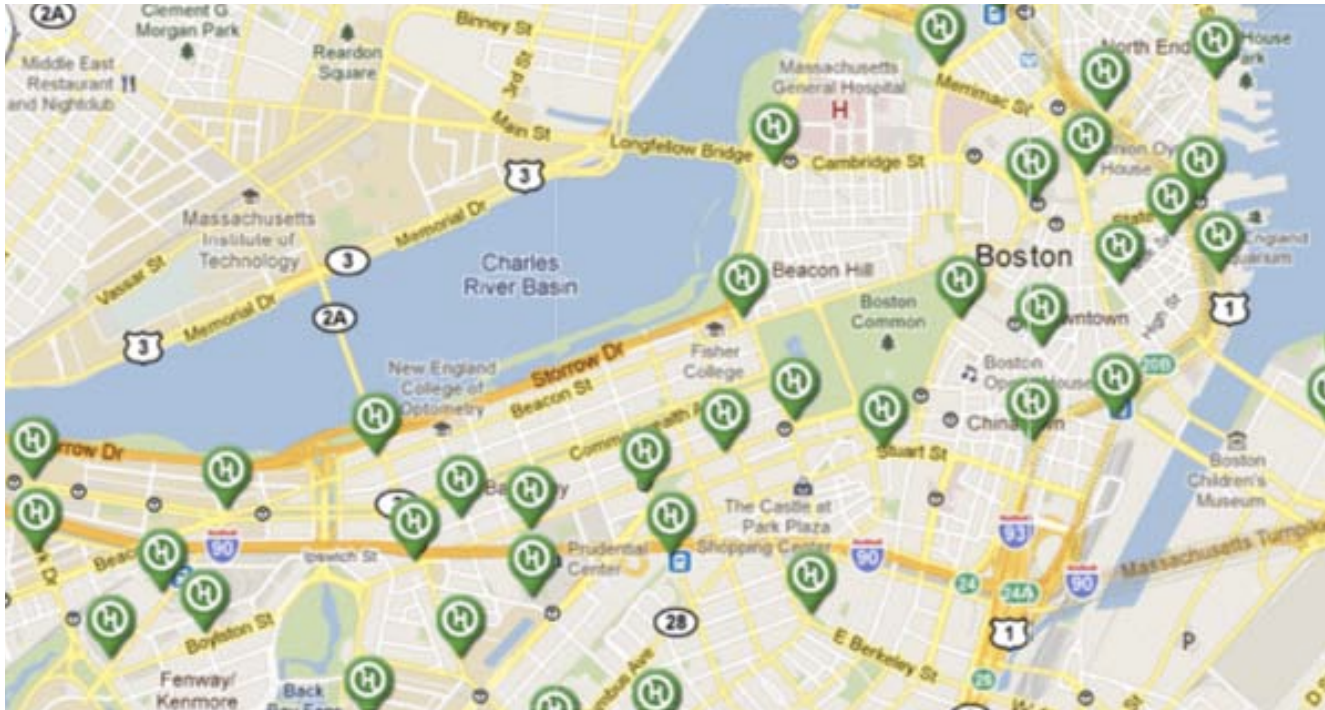
helmet hub



inspiration

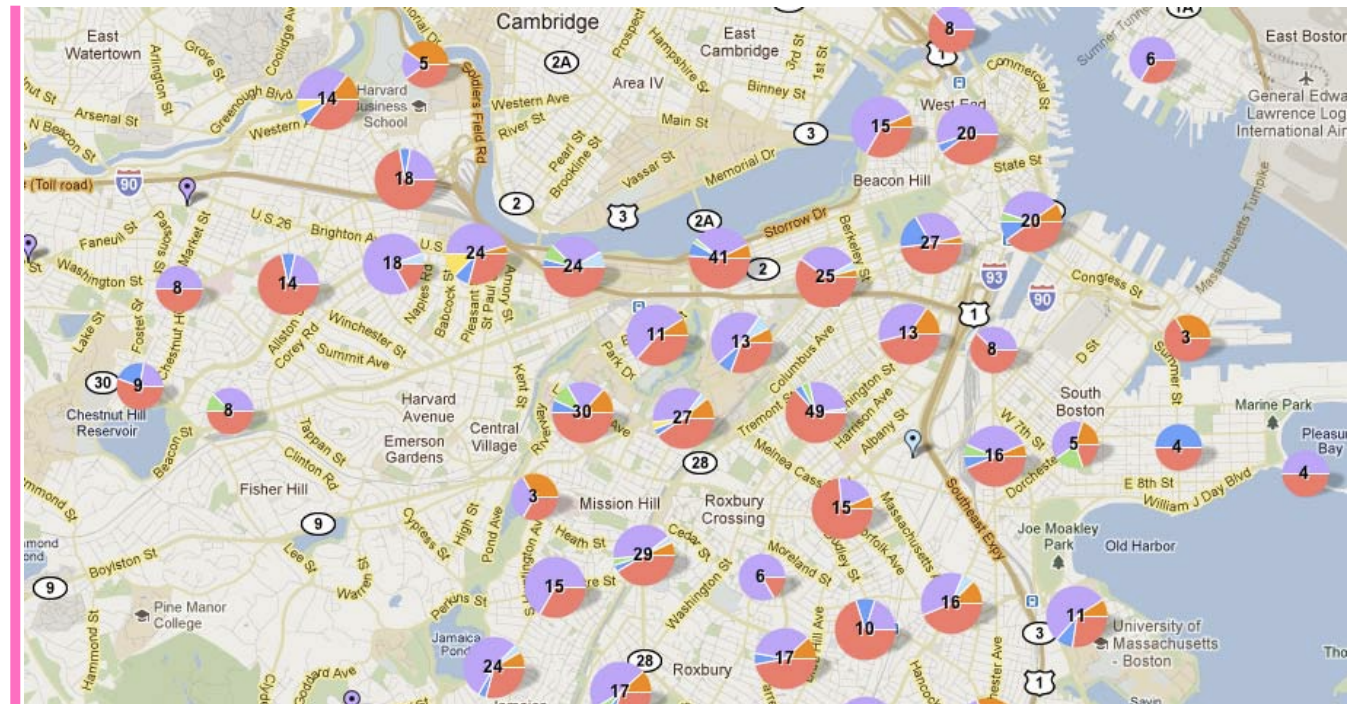
72% Boston bike riders wear helmets
32% Hubway users wear helmets

http://4.bp.blogspot.com/-_YQiyKtQlw/TcDFckJOBvI/AAAAAAAAHBk/Nd0tkPXh7s0/s1600/DSC_1771_01.JPG



dozens of
Hubway
stations already
exist in Boston

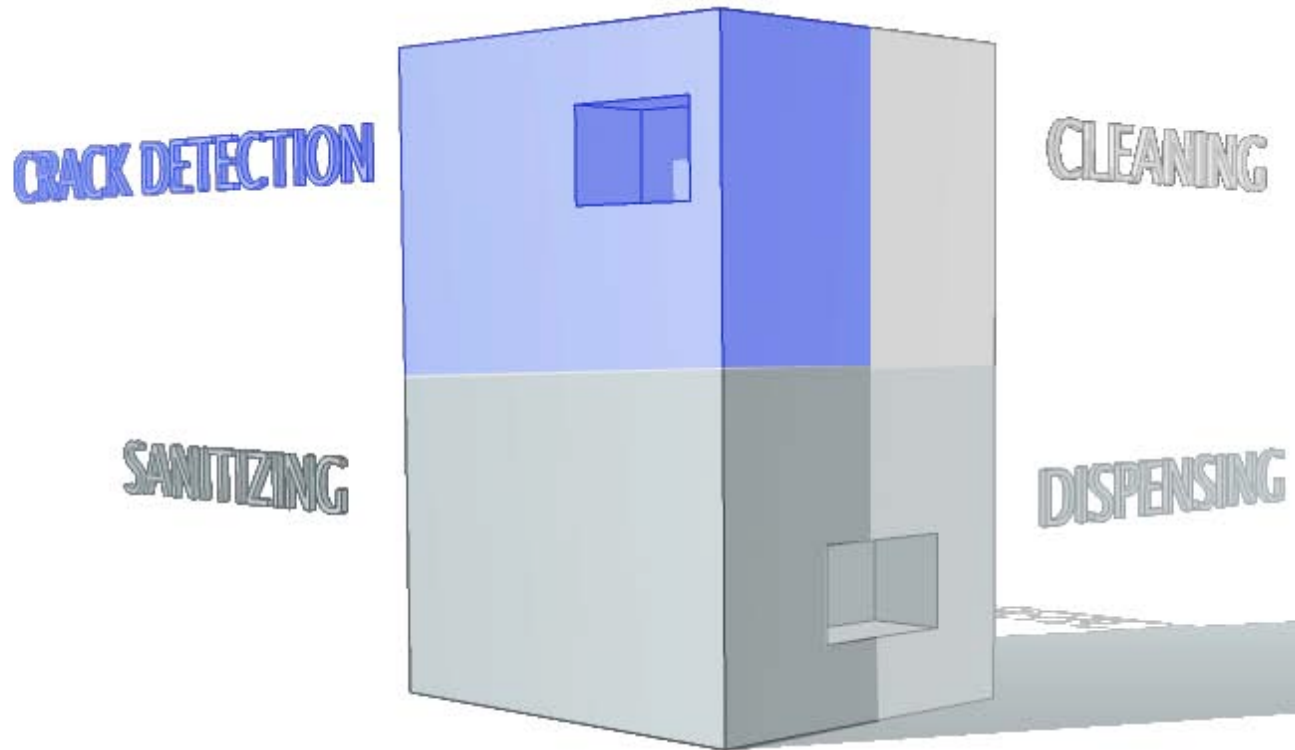
45% of all bike
accidents
involve un-
helmeted riders



<http://www.batchgeo.com/map/3654372f90062f71097944c69473117d>
<http://thehubway.com/stations>



working with Boston Bikes to conveniently
provide helmets to *all* their customers



features

vending, sanitation, crack detection, and return
solar powered

http://themuseumofthefuture.com/tmotf_live_09/wp-content/uploads/4644090037_e5060cd82c_o.jpg
http://www.bp.com/liveassets/bp_internet/solar/bp_solar_australia/STAGING/local_assets/images/01_REDGATE_TANK_2.JPG



benchmark

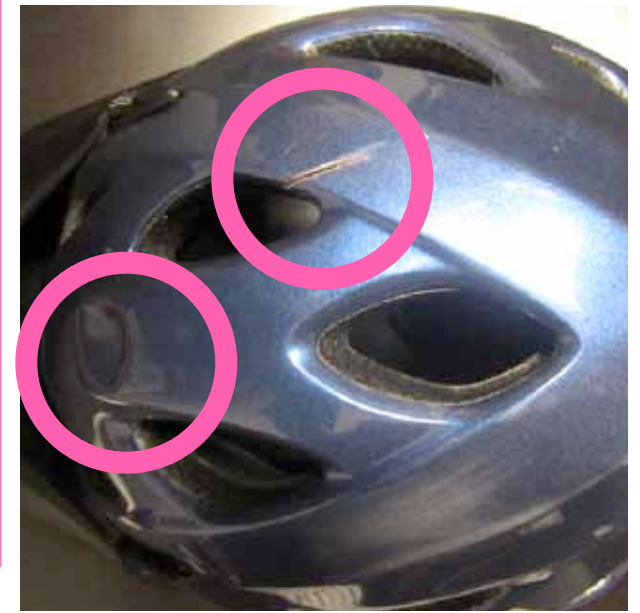
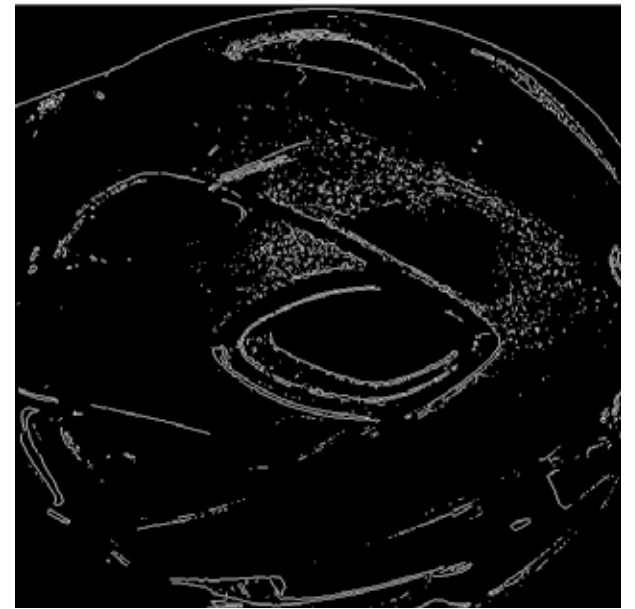
Melbourne Bikeshare vending machine
no existing automated crack detection

data acquisition

bridge images

detection

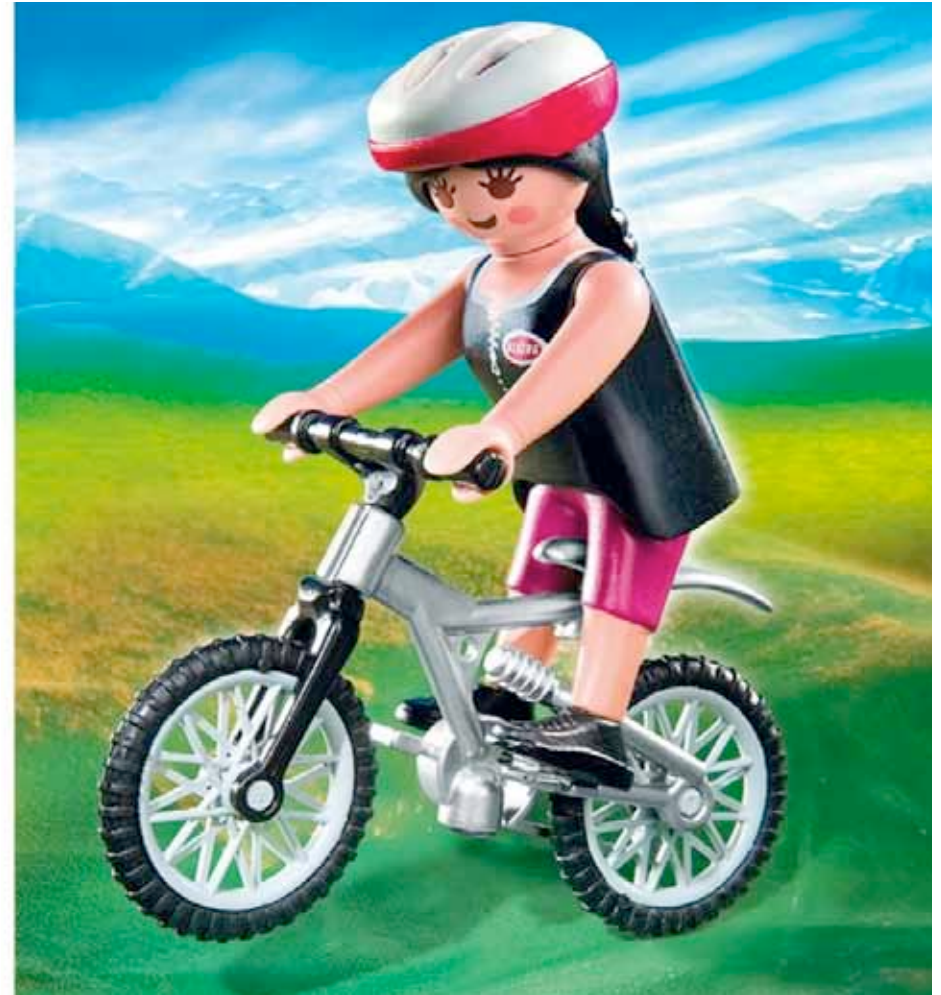
output





further considerations include scanning microfractures
in foam, safe dispensing mechanism, efficient stacking

http://www.trailblazersww2.org/sims_pictures/70th%20Helmet%20Pile.jpg
http://www.google.com/imgres?q=crack&hl=en&client=safari&rls=en&biw=1253&bih=657&tbs=isz:l&tbn=isch&tbnid=OxnVWP15pr7cd-M:&imgrefurl=http://training.ce.washington.edu/pgi/Modules/09_pavement_evaluation/09-8_body.htm&docid=IRqR9A3oq6_jqM&w=1280&h=960&ei=ij6NTq7Benx0gHcwFE0&zoom=1
http://3.bp.blogspot.com/_DTG5vL_NhEQ/TOp9m0Mfg5I/AAAAAAAAABHM/BgVgC6Sqaoo/s1600/vending%2Bmachine.jpg



market

300 global bikeshare programs
\$5.9 billion bike industry in U.S.



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questions?