1. The AT (automation test) are necessary for SUT because of the big regression scope should be run time to time.

All the new features coming to the site should be automated due to long term maintenance. It requires at least 2 parts:  
-smoke  
-regression   
  
all the runs should be performed due to needs of testing (integrity, regression, access and other reasons based on build changes)

1. According to the history in VS VCS , the TAF (test automation framework) was created in February, 2016. Let us analize part of this one – regression pack (2 parts). We assume the 3 month were needed to create the framework and 2 months to create tests for(168\*3 hours).  
   Either of parts of regression keeps 4 hours to be executed. Tests configuring in CI keeps not so much time – e.g. 3 hours per month, or 54 hours for framework from the creation. Each build keeps about 1.5 hours for 3 testers to be analyzed 1.5\*3\*388(builds)=1168 hours.

Cm for each build is about 10 hours. So for the all builds 388\*10 =3880 hours  
  
From the  we can calculate ROI = 1.24 (at the moment). And it will increase due to annual work items were done.  
  
ROI = (3880 – (1168+54+336+168))/ (1168+54+336+168)=1.24  
  
So the TAF brings positive effort for the SUT.  
  
Automated calculation using <http://www-01.ibm.com/software/rational/offerings/testing/roi/tool/ROI_Rational.html>   
(costs are randomly assumed)  
