



Supporting Open Innovation with Novel Software Solutions

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As pharma companies find themselves in an increasingly tight corner regarding pharmeddon less and less money is available for primary research. This has led to the rapid rise of Open Innovation as a means in which to refill the pipeline using the tremendous resources available in academia, start-ups and other biotech companies. These groups are dispersed around the globe, themselves running on limited financial budgets but with a proliferation of ideas and projects. Open Innovation has led to a need for Pharma companies to be able to work with external collaboration partners and assess projects. Open Innovation teams need access to up to the minute software solutions often on tight budgets. Within Open Innovation projects exist in which it is useful for scientists from different locations to collaborate with each other in a central IT environment. We present three solutions that ChemAxon is working on in support of Open Innovation.

1) Building structure and data submission interface for large pharma to asses OI projects

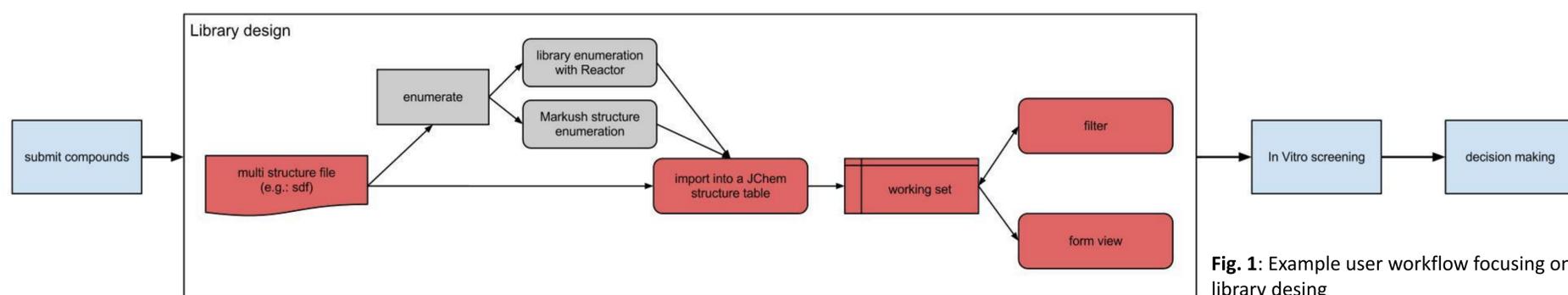
The driving force: Large pharmaceutical companies would want to work with external partners (academic in particular) to find new potentially interesting and relevant chemical structures, drug candidates. They are in urgent need for a system to enable external groups to submit their structures but in fact in this example the pharma does not want to know the structure (compromise IP) so only wishes to see the data. The data needs to be in an easily readable format so that the pharma company can make a quick evaluation of the desirability of the proposed structure and move to further negotiations.

Project aim

- Provide web access for all ChemAxon products – including currently command line and API tools
- Feature parity with desktop applications
- Support all devices – including touch

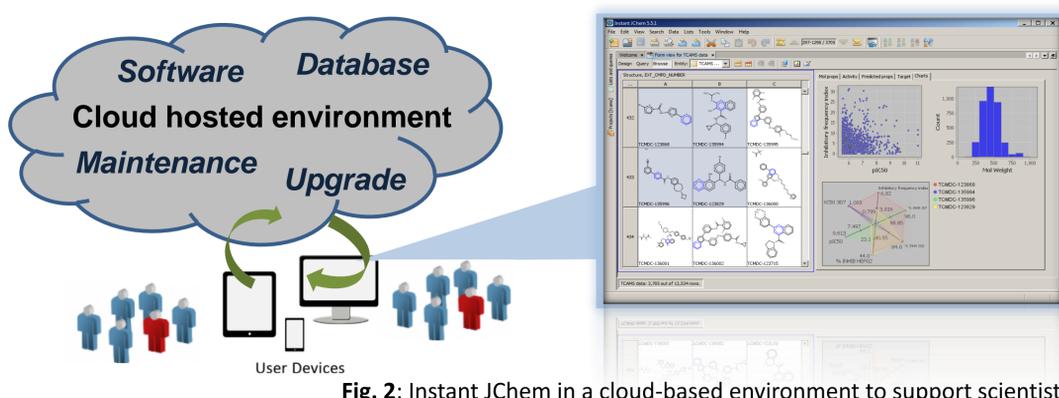
Concept

- Take chemicalize.org as a base
- Design easy to use workflows and project oriented GUI
- Deliver modules for You to organize them
- Focus on visualization, user friendliness and speed



2) Supporting globally distributed collaborative research in the area of neglected diseases of the Developing World

In support of GlaxoSmithKline's research centered around the area of diseases of the developing world, the Research and Development Aligned Innovation Group (R&D IT Lite) wanted to securely connect GSK scientists with external scientists anywhere in the world to collaborate on the shared interest topics. The development required a solution that allowed access to users outside of the GSK internal network regardless of location and device, without exposing GSK proprietary data. ChemAxon provided technology and data handling expertise, the R&D Lite team provided the know-how for cloud based solutions. The project involved building a complete SaaS model using Amazon Web Services (AWS) and Citrix XenApp. The result is a proof-of-concept prototype that was set-up quickly, is simple to access and gives visibility of key data to researchers wherever they are working in the world. This helps those involved to more rapidly and collaboratively fight some of the world's most neglected diseases, such as Malaria which kills 800,000 people a year.



Features

- Instant JChem (IJC), a published app in Citrix
- IJC executes on an EC2 machine
- EC2 machine has an MySQL database with anti-malarial data running
- Access controlled by username/password
- Fully hosted service
- Unlimited number of users
- Simple log-in and handling (No IT dept. is needed)

3) Improving access to cheminformatics tools for start-ups

Start up companies in incubation need powerful tools like all researchers do but are constrained by limited budget and time. ChemAxon works with incubators to provide easy access to it's software.

The System: ChemAxon desktop and enterprise tools are installed on the central web server of the incubator which they can on-license to tenants. Access is via password.

System features: Accessible anywhere (cloud hosted), no separate agreement with software vendor, no IT skills or team required, immediate start up once registration complete, fees are paid to the incubator along with the rent..

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