

# PHARMACIST EXPERIENCE IN CONTINUING IMPROVEMENT OF AUTOMATIC SYSTEM

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## Background and purpose

APOTECACommunity is a workgroup on robotics where all the users of APOTECAchemo can share their expertise. An annual meeting is organized to discuss with the manufacturer the next developments and define the best practice. The feedback collected during the meeting represents the base for the next system upgrade aimed at increasing performances.

Some improvements that we have suggested are included in the 2012-upgrade and affected our productivity: a new procedure for the reconstitutions; an extemporaneous picking list; a faster communication between the management software and the robot; a more efficient vision system for the vial label identification.

The aim of this work is to quantify the benefits that pharmacist reaped in the day-to-day work in terms of productivity (number of preparations/day), after the annual upgrade.



## Material and Method

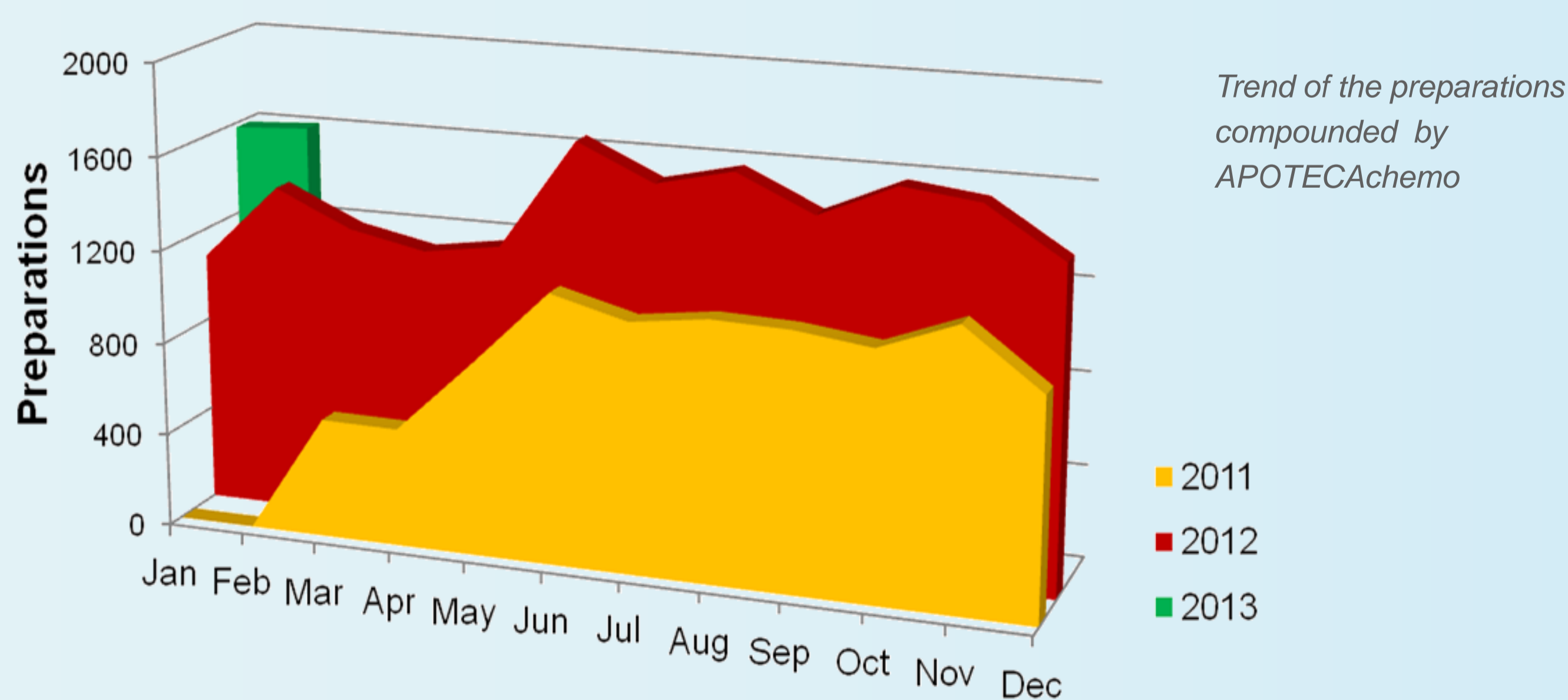
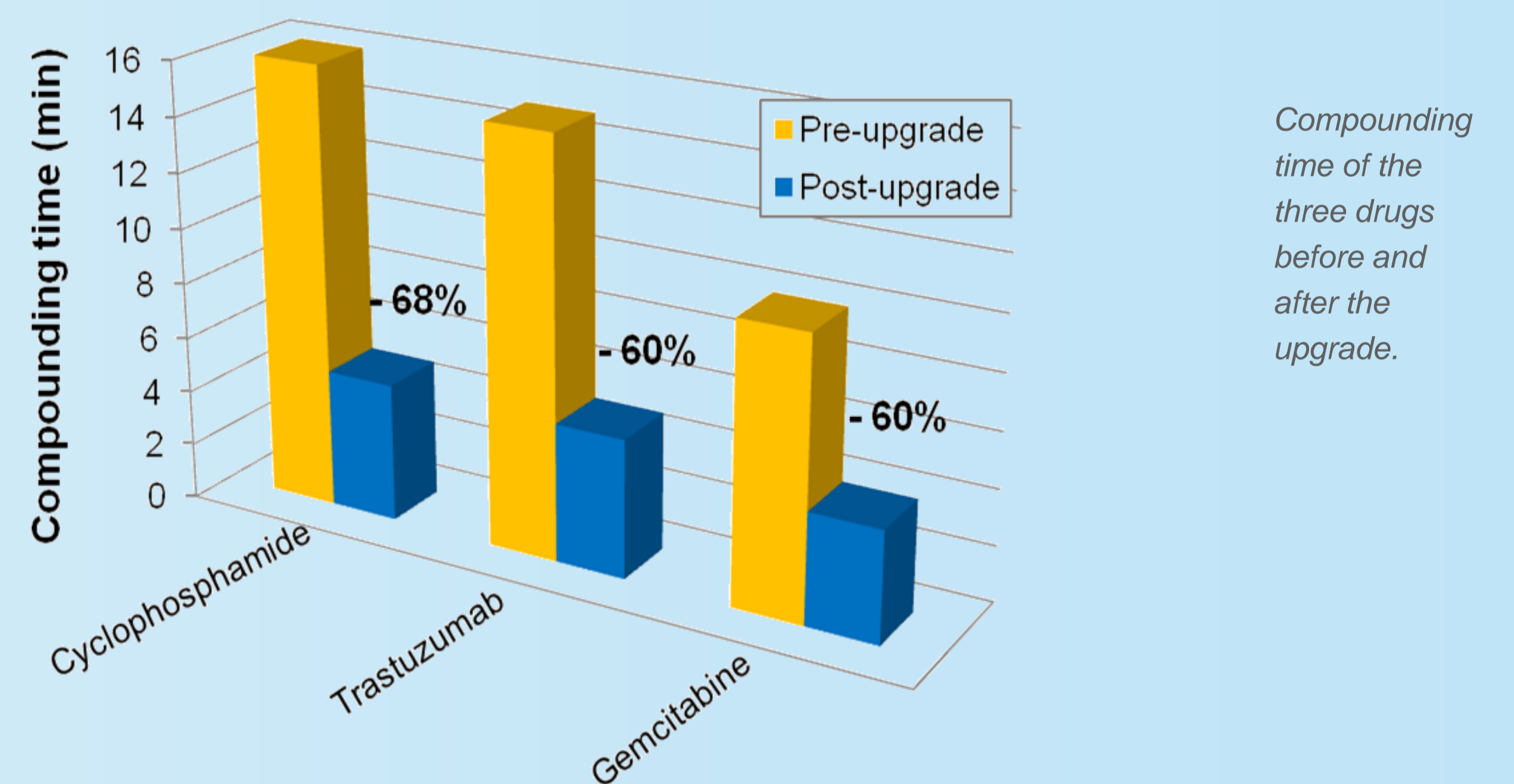
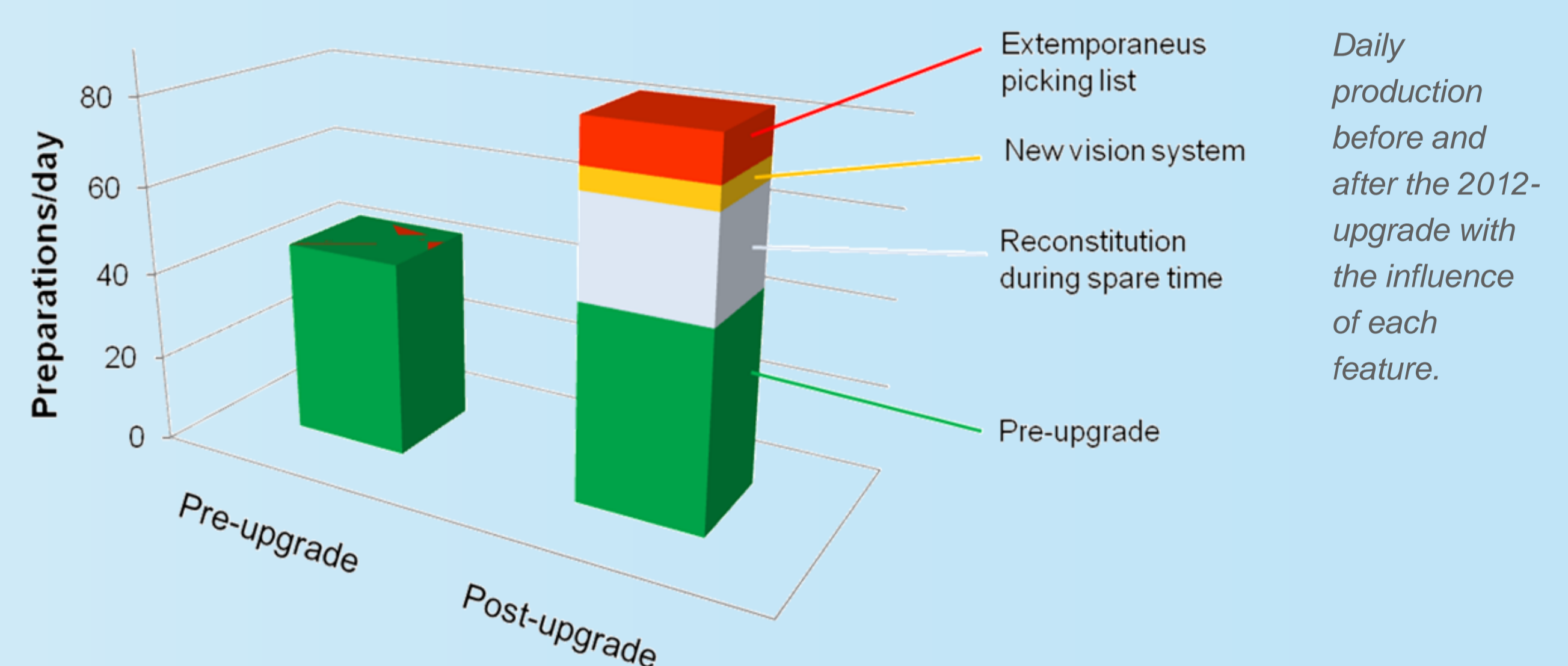
The APOTECAchemo performance was analysed before and after the 2012 upgrade. The influence of the most significant functionalities (an extemporaneous picking list, a new vision system and a dedicate procedure for the reconstitution of lyophilized drugs) on productivity was examined.

The change in the preparation time of lyophilized drugs with high stability [1] (Cyclophosphamide, Trastuzumab and Gemcitabine) was also investigated.

## Results

An average of 45 preparations per day was compounded before the upgrade, with a maximum of 60 preparations. After the installation, an average of 83 preparations per day was recorded, with a maximum of 100.

The most affecting feature is the new procedure for the reconstitutions. Indeed the dissolution of stable lyophilized drugs (Cyclophosphamide, Trastuzumab and Gemcitabine) during “spare time” (weekend, early morning, lunch time) have allowed an average gain of 55 (11.5%), 72 (15%) and 24 (5%) minutes per day, respectively.



## Conclusions

The new upgrade allowed an increase of 84.4% of the daily productivity. The constant multidisciplinary dialogue among the stakeholders (physicians, pharmacists, technicians and engineers) guarantees a better and better integration of APOTECAchemo in the daily clinical activity and a continuous development of the technology.

Reference:  
[1] [www.stabilis.org](http://www.stabilis.org)

