

Python for non-Programmers ¹

Willem Hoek

Note 1 -- Not being paid to do development -- but need Python to do my work

About me

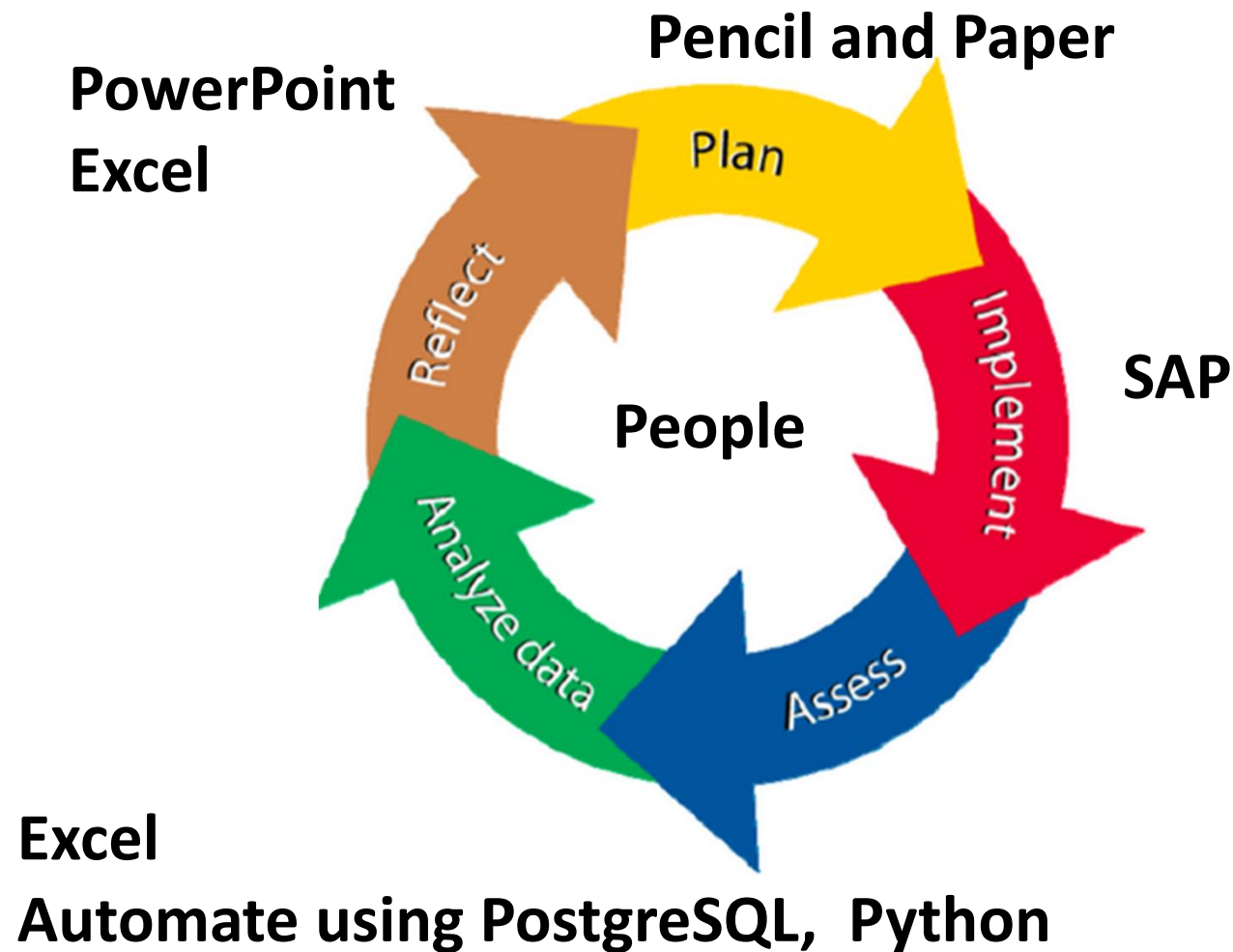
- “ Engineer by training
- “ Co-founded startup | Electronic catalog & ordering
- “ Management Consultant
 - . Process: Supply Chain, Logistics, Order-to-Cash, Accounts Receivables
 - . Role: Bridge between Business and Technology (IS)
 - . Industry focus : Mostly consumer business



- . Approach: Data Driven Decision making
- “ Contact details – see willemhoek.com

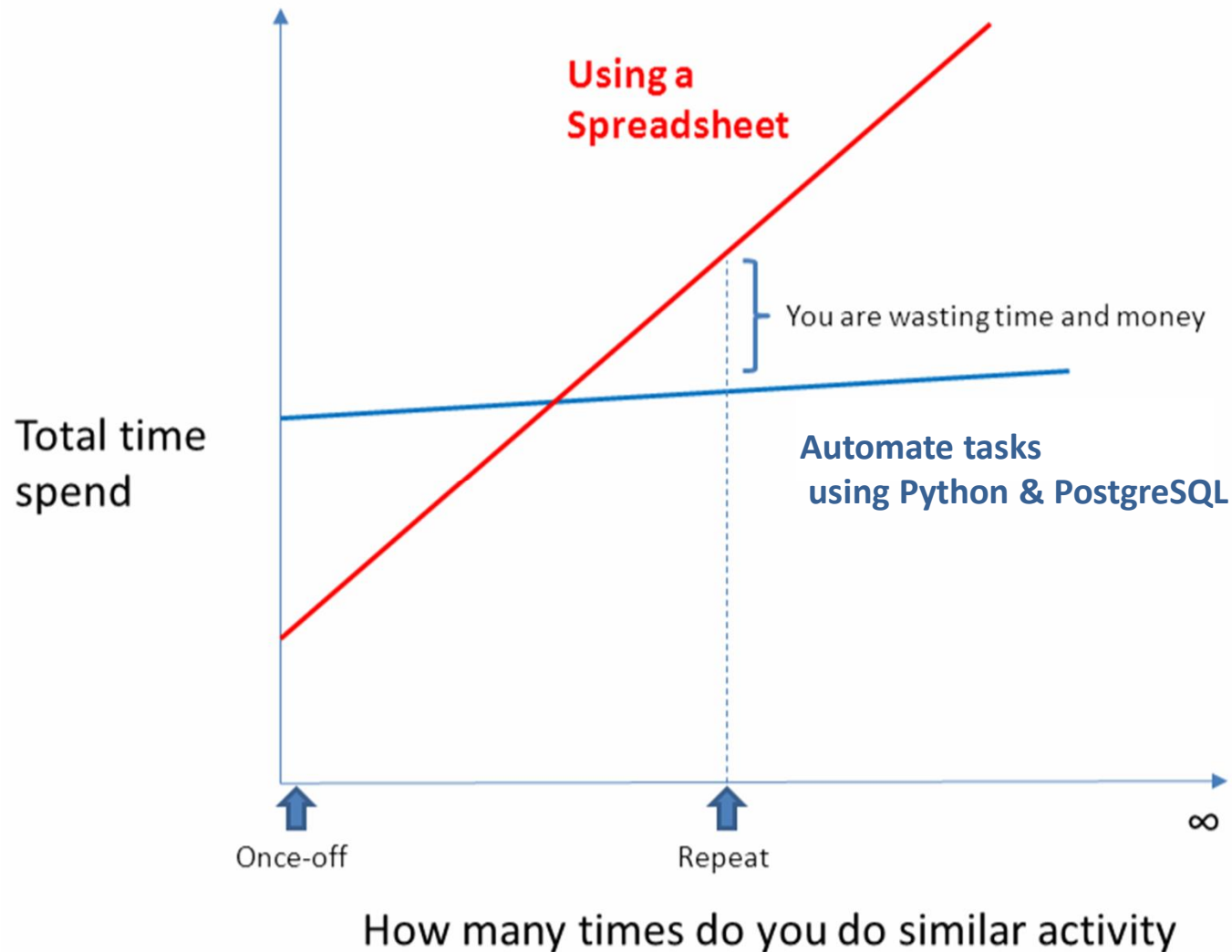
Data-Driven Decision Making

.... my tools of the trade



To work efficient

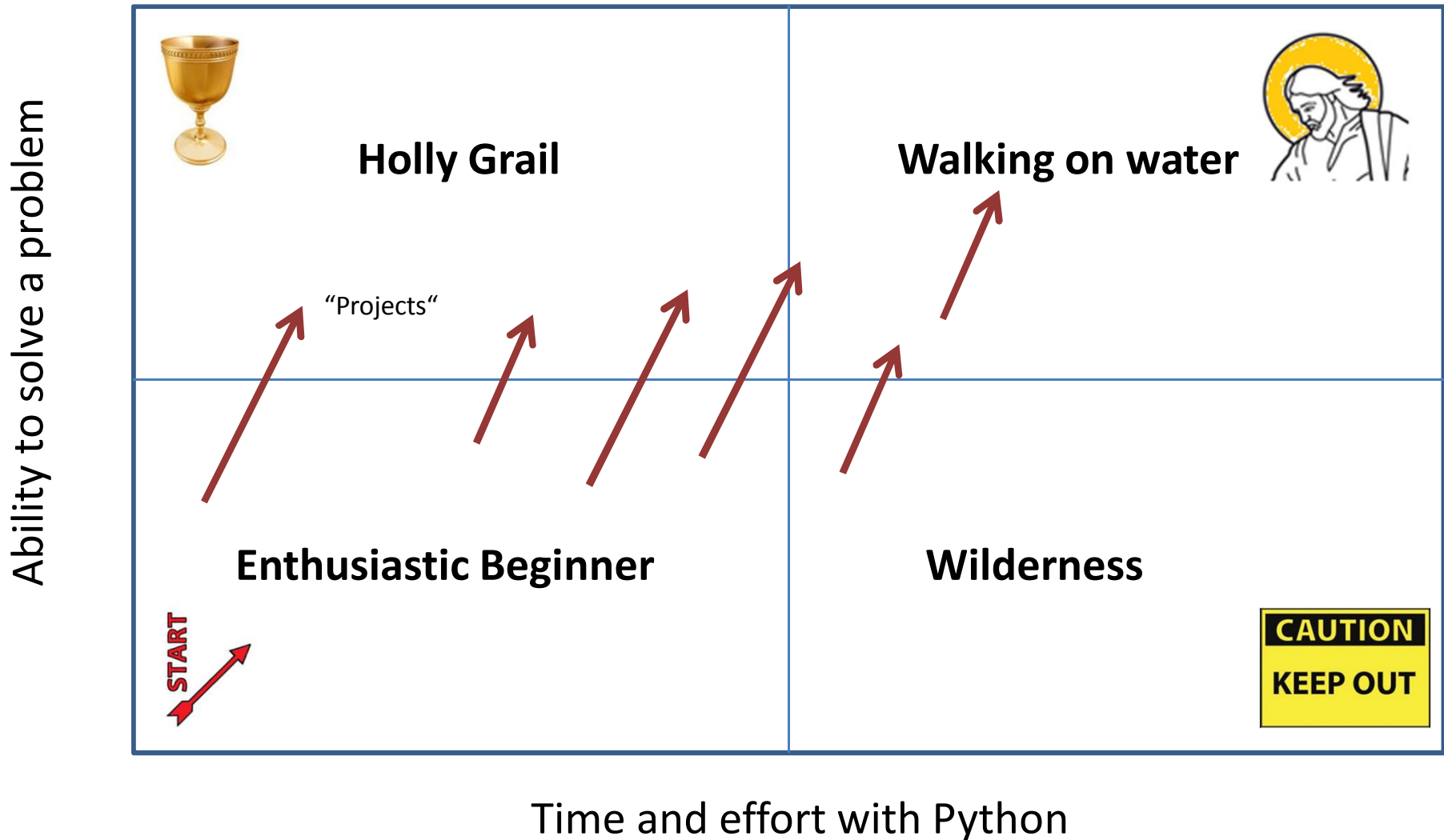
Automate the process



Lets get going with Python

- “ Download Python from Python.org
- “ Or rather a Distributions (incl. Python packages)
 - . Anaconda → Continuum Analytics
 - . ActivePython → ActiveState
 - . Canopy → Enthought
 - . Python(x,y), WinPython
- “ Coding environment
 - . Editor eg. Vim (*for BIG files*) Sublime Text (*user friendly*)
 - . IDE eg. IDLE, Spyder
 - . iPython & iPython Notebook (*to test code snippets*)
 - . Remember: someone has done it before → search the web

The Python Game



Project / Pilot approach



Ask

- “ What problem are you solving?
- “ Single user vs multi user
- “ Command Line vs Web
- “ Components / Architecture

- “ Search for code
- “ Test in iPython notebook
- “ Add to program

- “ DEV / PROD
- “ Source code hosting BitBucket, (Github)
- “ Deploy tools Fabric

- “ Track usage
- “ Fix bugs

Tools

- “ Pen / paper
- “ Mock design in XLS
- “ Have ToDo list for your Minimal Viable Product (MVP)
- “ Have Action items in 25min buckets next 5 days

Project 1 – Generate txt file to upload into ERP system

“ Objective

- . Quickly generate text file based on set of business rules
- . Business Rules → Python code → Create txt file → ERP (SAP)

“ Python

- . Single file .py / 200 lines of code (LOC)
- . Single user (was not me)
- . Package using py2exe to avoid Python installation

Project 2 - Parser date from a SAP report and import into database

“ Objective

- . Parse “|” text files (from SAP) and import into database
- . Ugly txt file from SAP → input file + SQL

“ Python

- . Single users (me) / Command line tool
- . Single file .py / 280 LOC (including comments)
- . Used in data migration of multi-million Rand SAP projects

```
python se16.py -i input_file.txt -f sorg -t kna1vv  
-o output_data.txt -s output_sql.txt -d "|"
```

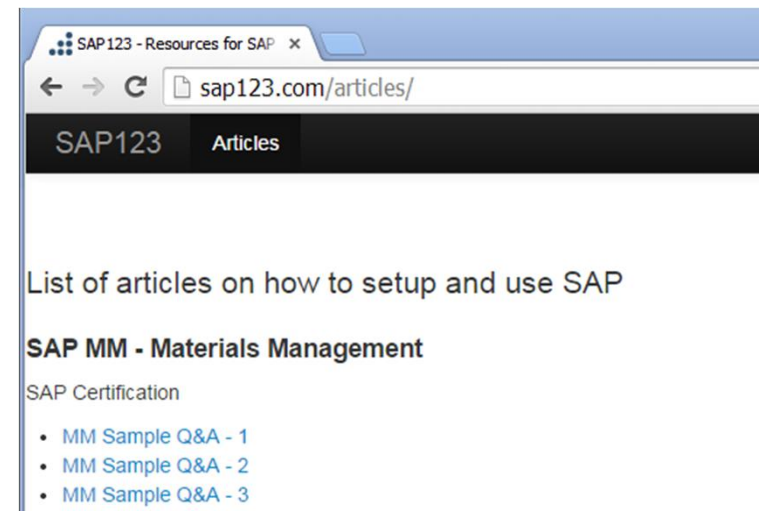
Project 3 – Website

“ Objective:

- Website to make info available to SAP consultants
- Learn how to set up Linux based website
- Learn the basics of Python & Django / HTML CSS

“ www.sap123.com willemhoek.com

- Django (Python)
- Debian / PostgreSQL / Linode hosting \$10 month
- Initially Apache then later nginx
- Source control → *BitBucket*
- Deployment → *Fabric*



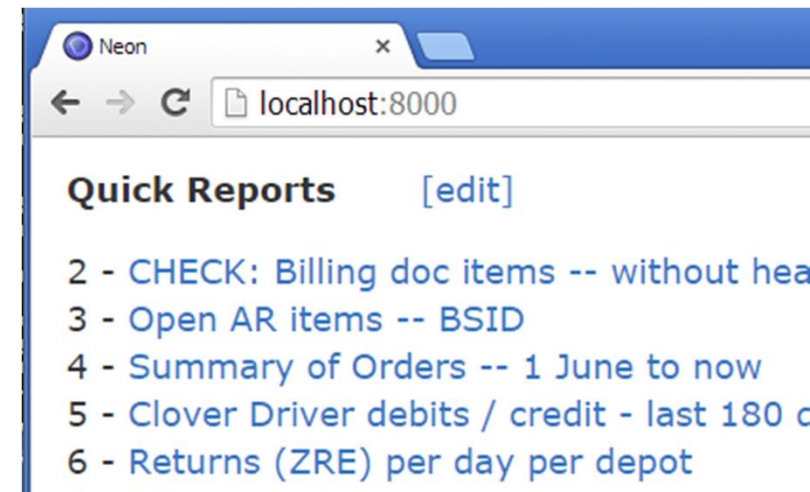
Project 4 – Quick Reporting / Monitoring tool

“ Objective

- . Rapidly build and distribute Flash Reports
- . From testing SQL to simple report in minutes

“ Components:

- . Multi user / Web based
- . Python Django web framework (using Apache web server)
- . Parse data files (from SAP) and import into database (PostgreSQL)
- . Create simple reports based on SQL
- . Simple table based reports + ability to copy / export



PROGRAM

OR BE

PROGRAMMED

Thank You