

Saving 1,000 hours with

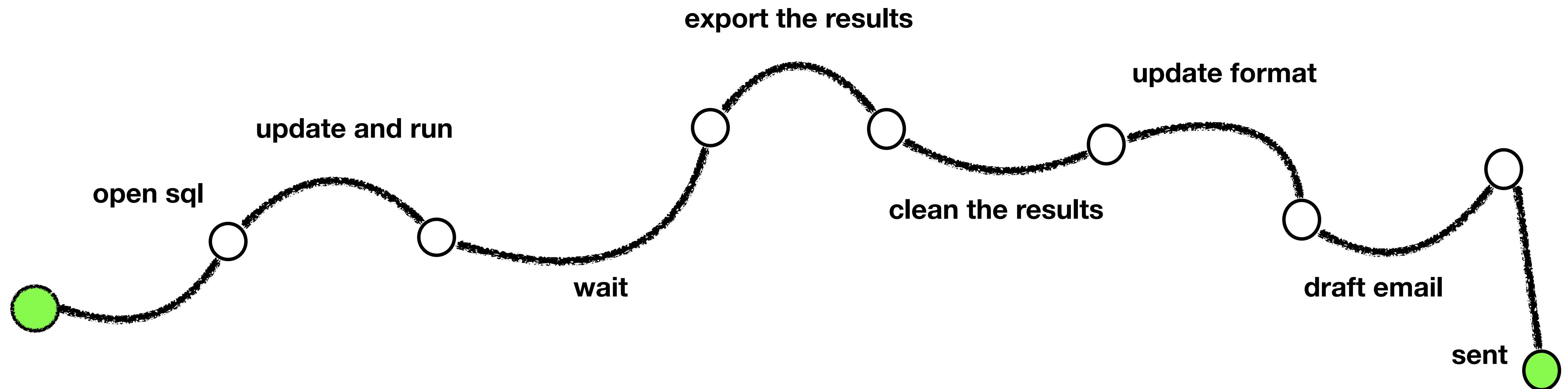
Tiger Tang
Data Scientist, CARFAX
StatRday DC 2020

Background

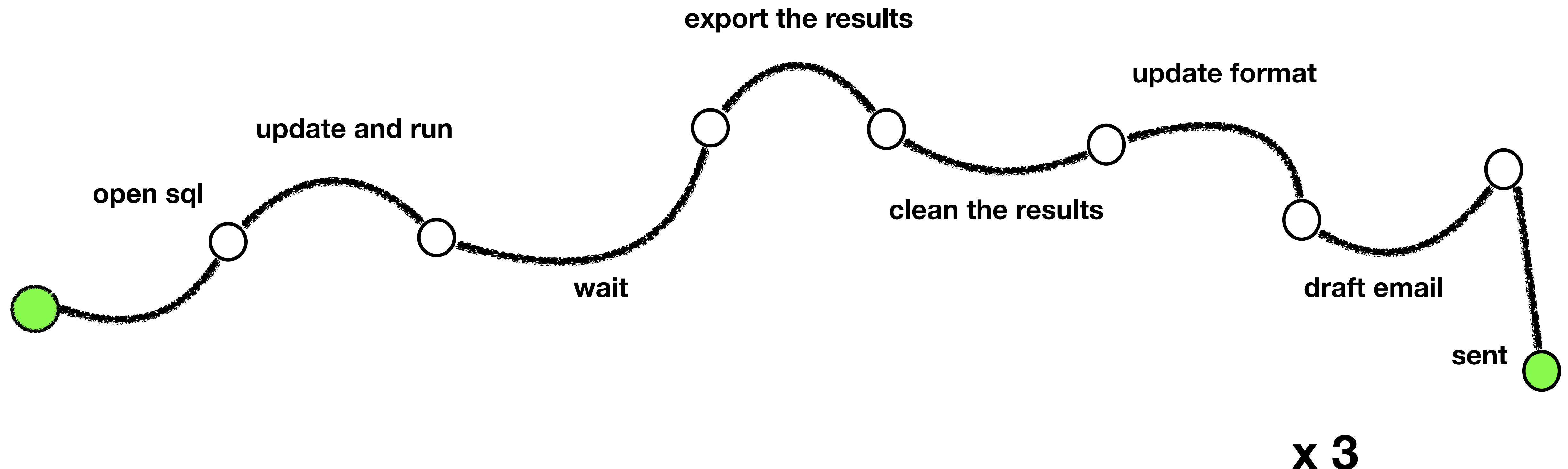


- Moved from SAS to R
- R adoption rate was not high
- Things were handled with Excel
- I was tasked with 3 reports that deal with Excel

A typical report



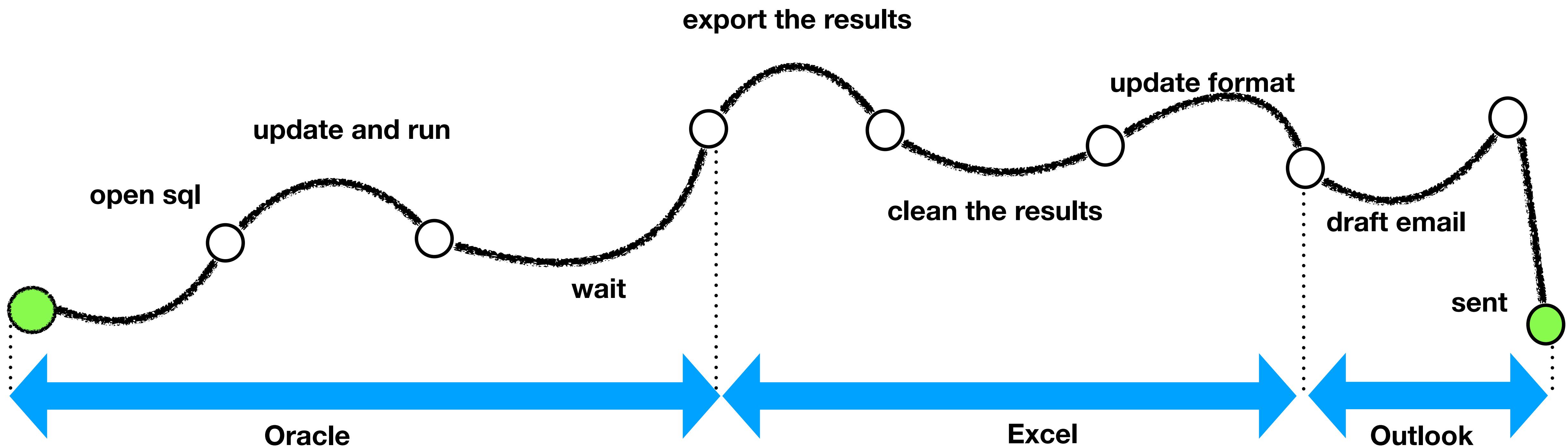
A typical report



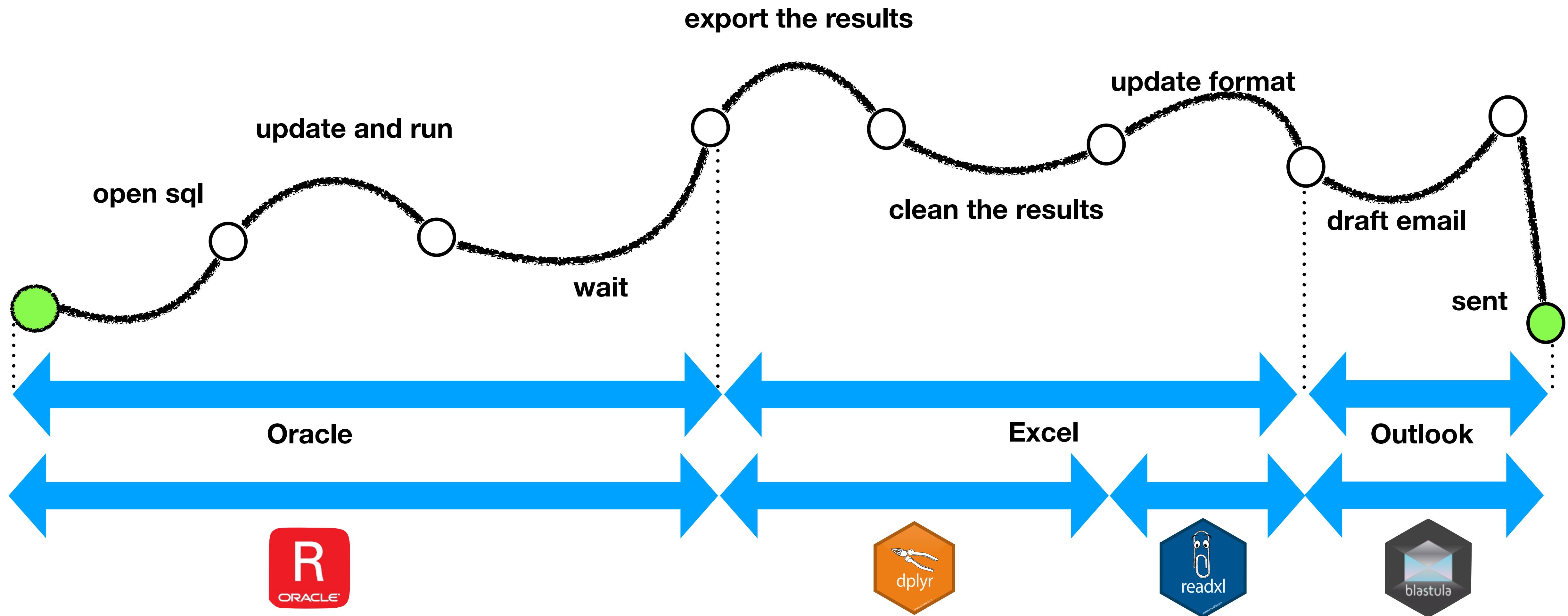
This is what my Monday use to look like



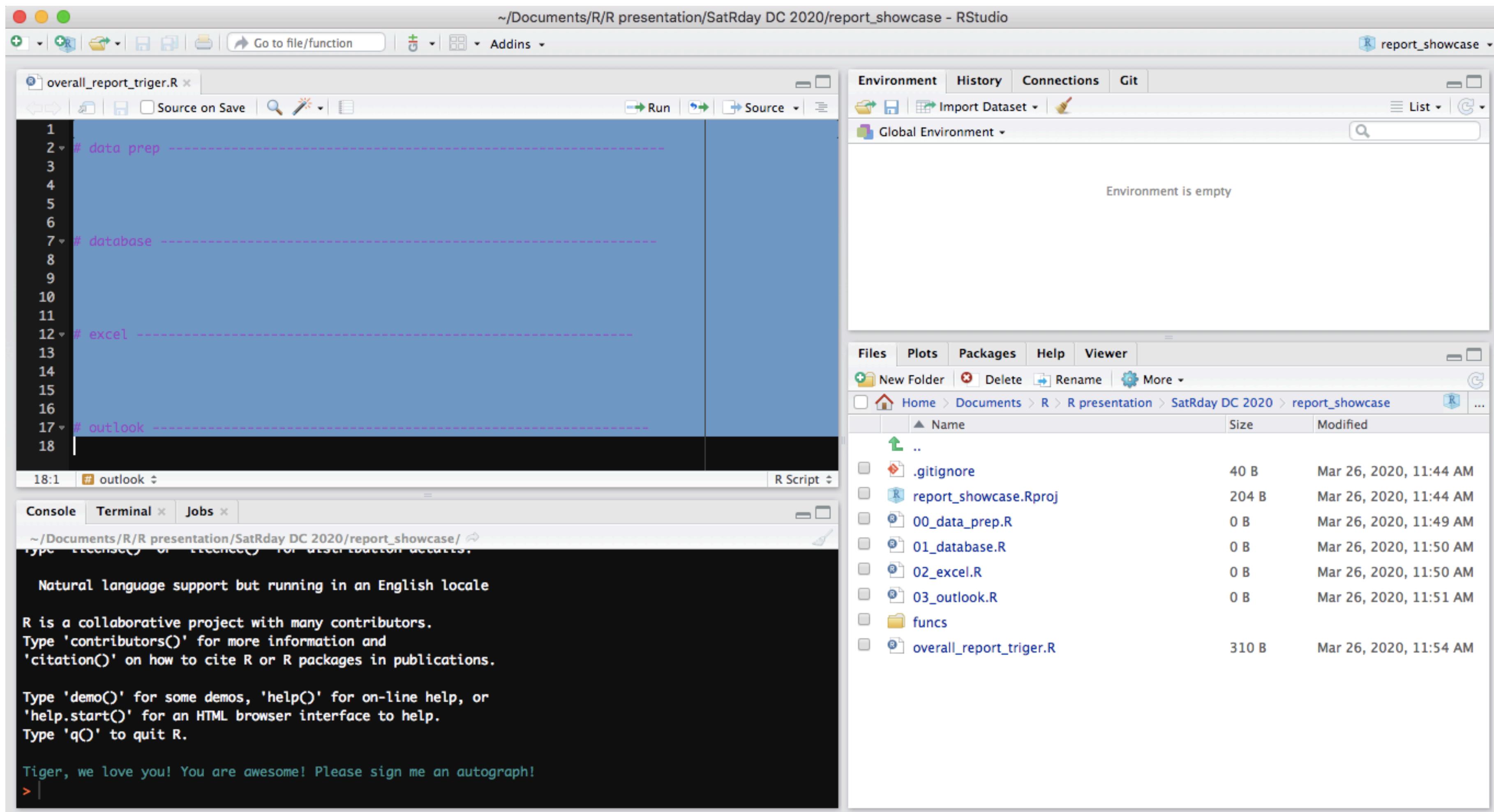
Then I realized



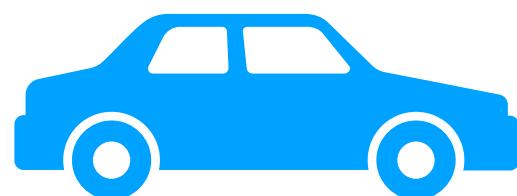
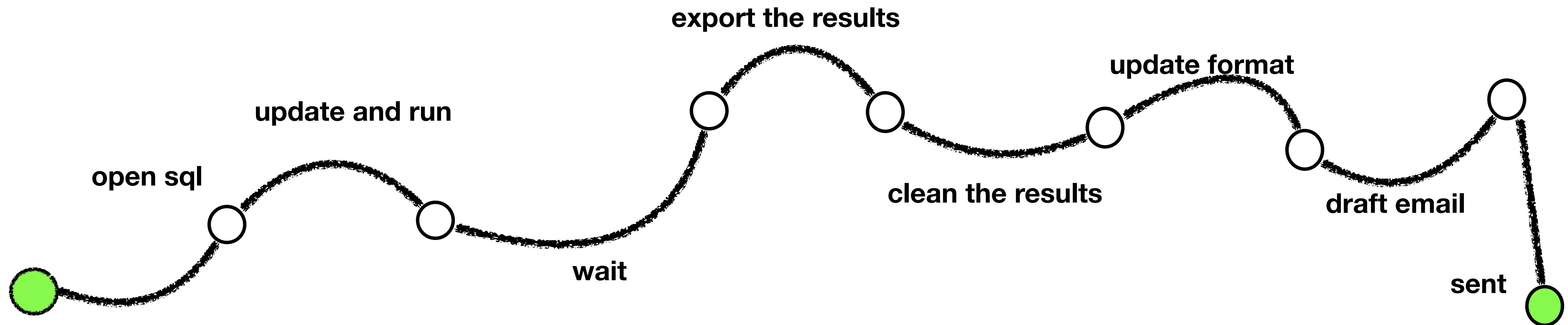
Then I realized



After hours of work



My new Monday



1 hour driving



0.2 min

My new Monday



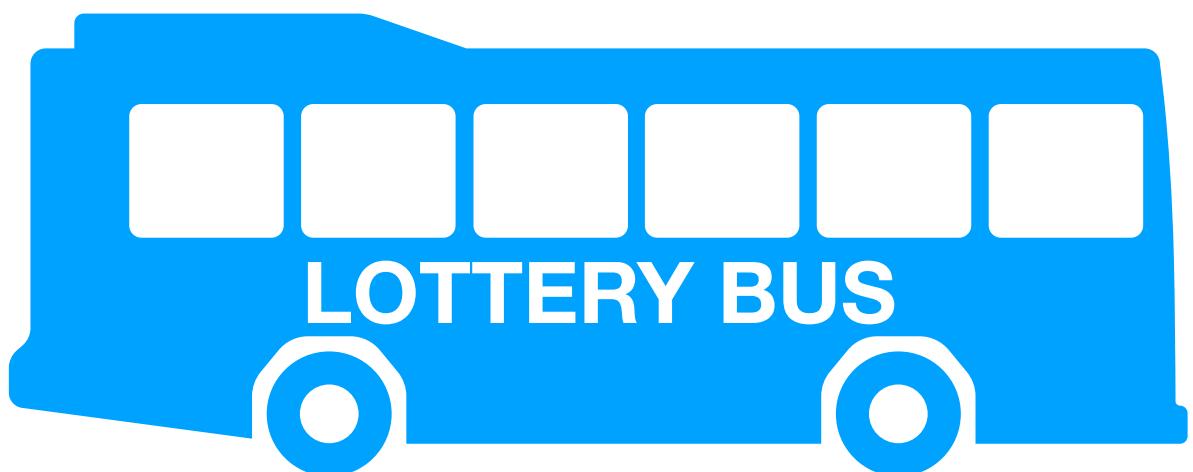
Is that all?



Documentation



Accessibility



Coverage



Ad hoc error

Evaluation

In a given month,

- 120 Reoccurring reports (daily, weekly, monthly, quarterly, yearly)
- 40 analysis (monthly, quarterly, yearly)
- 150 ad hoc requests from business that requires accessing data with sql



Automation project – Rocky

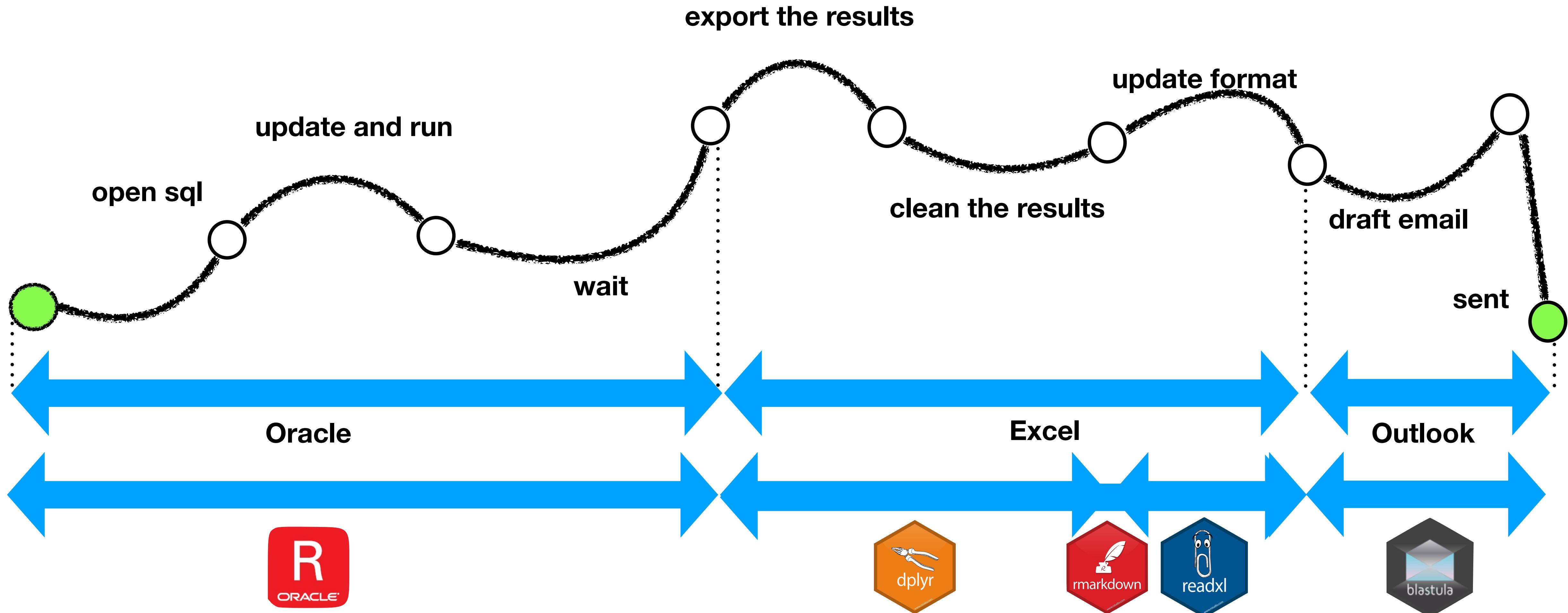
- ④ 1. Automation of reports/analysis



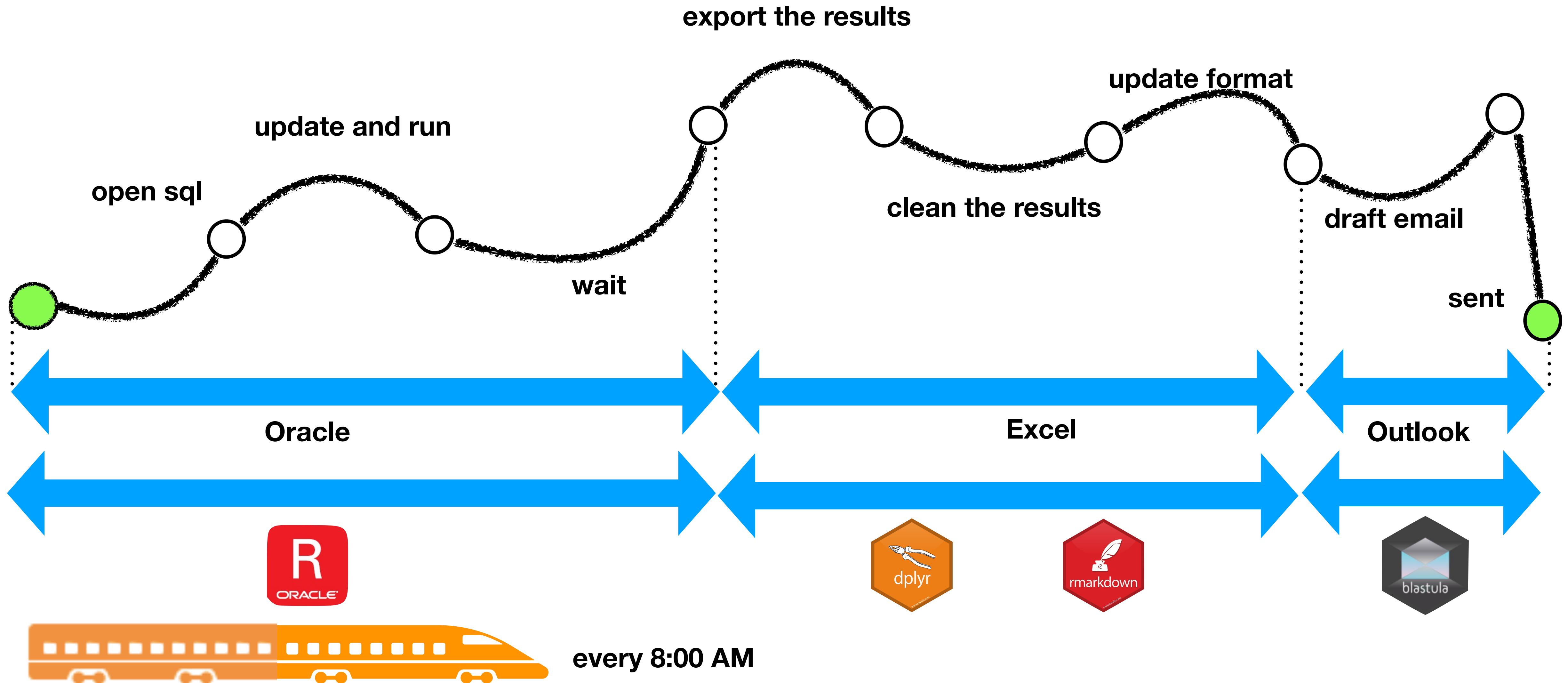
Levels of automation

		Prep for next steps
	Check efficiency	<ul style="list-style-type: none">• Remove dependencies• Prep for error lookup
Fulfill the task	<ul style="list-style-type: none">• Streamline your process• Process improvements	
	<ul style="list-style-type: none">• Rewrite steps with R• Control input parameter	

new report



new report



Automation project – Rocky

- ④ 1. Automation of reports/analysis
- ④ 2. Documentation of reports/analysis

Documentation

Reports

- Step by step instructions of all reports
- Package that triggers all reports

Analysis

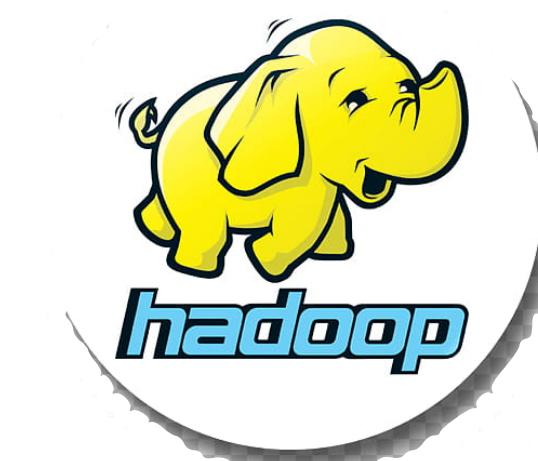
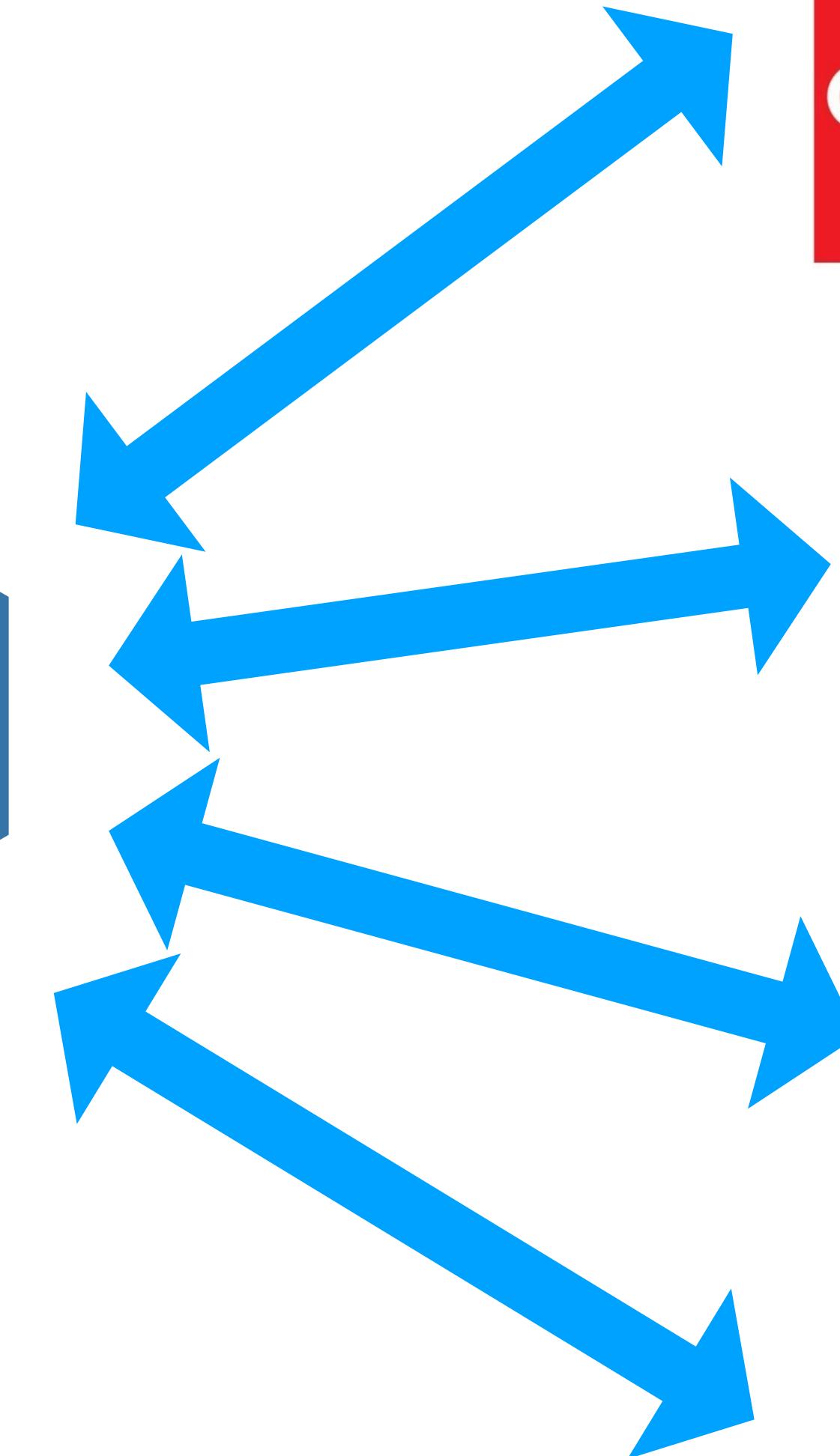
- Instructions of maintaining R scripts
- Package that has all the analysis functions



Automation project – Rocky

- ④ 1. Automation of reports/analysis
- ④ 2. Documentation of reports/analysis
- ④ 3. Applications

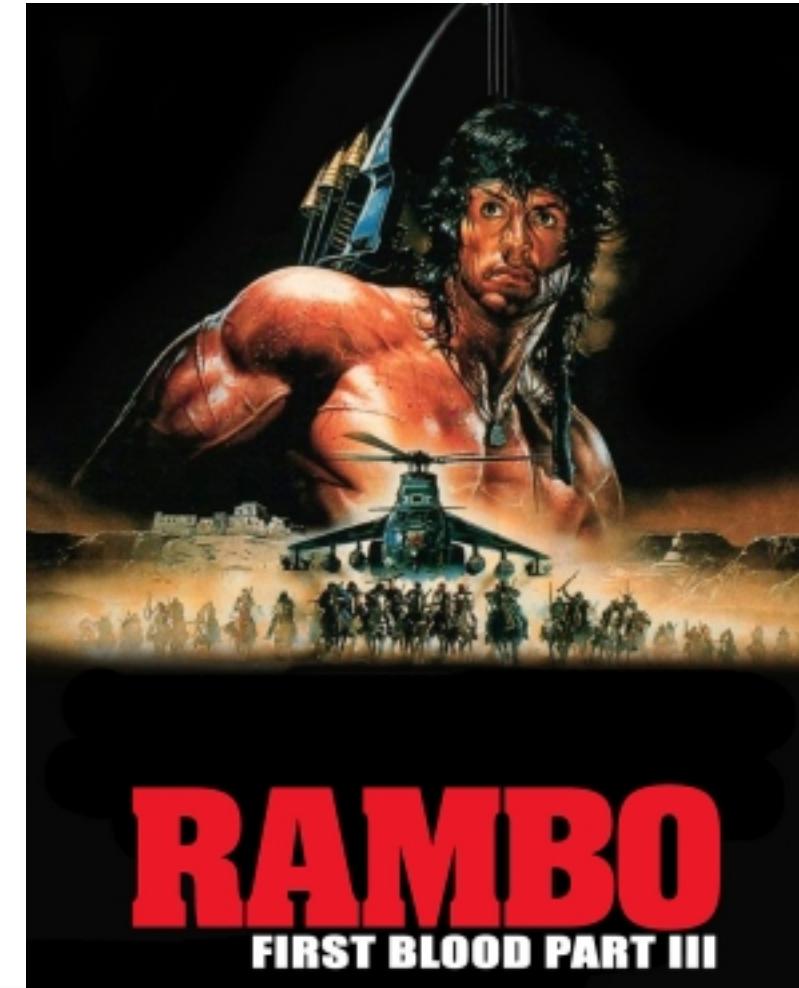
Applications



Applications



Account management



Specialty



Automation project – Rocky

- ④ 1. Automation of reports/analysis
- ④ 2. Documentation of reports/analysis
- ④ 3. Applications
- ④ 4. Training of Department (New R book/ Workshops)

Training

BASIC R -- R U READY?

Tiger Tang

CARFAX

FEBRUARY 23, 2017

CARFAX



- Shiny dashboard in 20 mins
- Build R package in 5 mins
- Async in Shiny apps

Automation project – Rocky

- ④ 1. Automation of reports/analysis
- ④ 2. Documentation of reports/analysis
- ④ 3. Applications
- ④ 4. Training of Department (New R book/ Workshops)

Communication

Supervisor

- Cost benefit analysis
- Tracking your efforts
- Tracking your progress

Co-worker

- Expectation of the project
- Goal of the project

Stakeholder

- Impact of the business
- Expectation

Have the right balance

Doing All in R

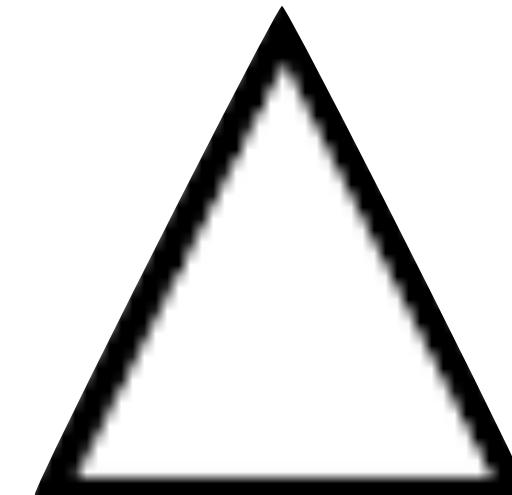
Cool

manual
work

Doing specifics in R

Useful

Development



Current workflow



Analyst



Manager



Me

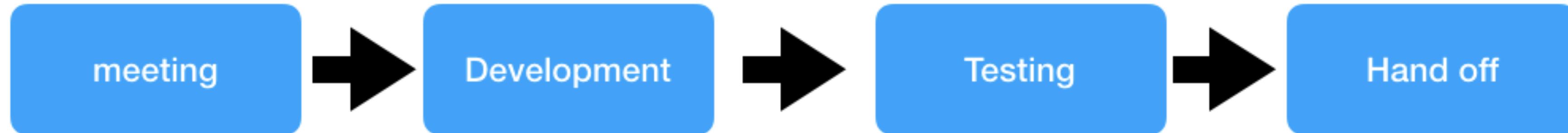
Documentation



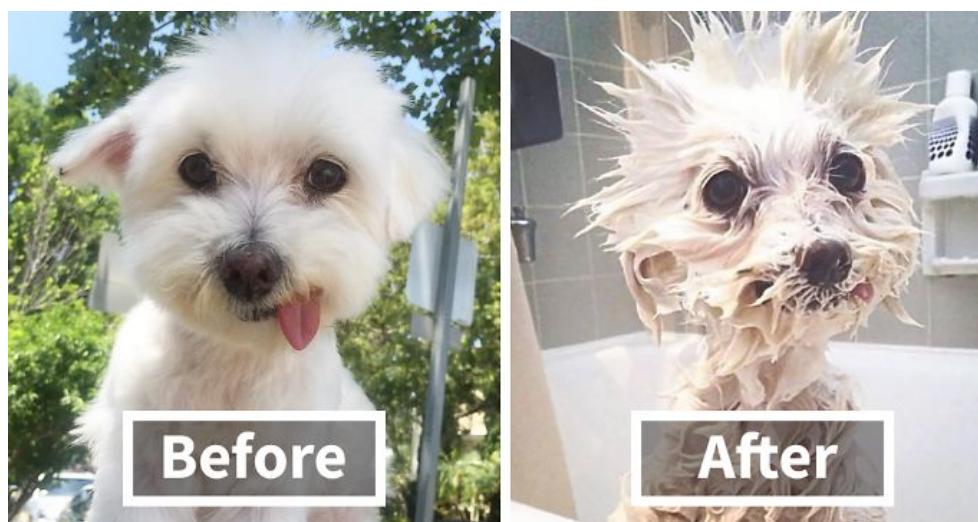
Prioritization



Development



Progress



So far

2,000 requests
1,200 reports
480 analysis

50 individual docs
2 internal package
8 shiny apps

1 book
3 R training
3 workshops

1,960 hours per
year

Contact

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- Linkedin: www.linkedin.com/in/chongtaitang/
- Github: [CodingTigerTang](https://github.com/CodingTigerTang)

**Feel free to contact me if you are doing a similar project!
I do consultation/training for coffee beans!**