



BASE

Behavioral Assessment to Improve School Environment

BASE 01: Development of the BASE application

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O1: Development of the BASE application



Output description

The Intellectual Output 1 (O1) aims to expand the functionalities included in the [WHAAM application](#) according to the theoretical and methodological constraints defined by the PBS approach.

O1 – BASE: Who are the users?

- The main targets of the application are **school leaders** and **teachers**.
- **School leaders** will have a powerful tool to perform a continuous and universal screening and monitoring of the ongoing educational processes.
- **Teachers** will take advantage of the possibility to access evidence-based features that help them to evaluate the efficacy of their training actions on multiple levels (students' performance, reduction of problem behaviors, levels of the classroom well being, etc.), to share the educational events with other colleagues and with students' caregivers promoting an a better communication and connection between school and families.
- Moreover, also **students and caregivers** could consult and participate in the collection of some data in other contexts than school.

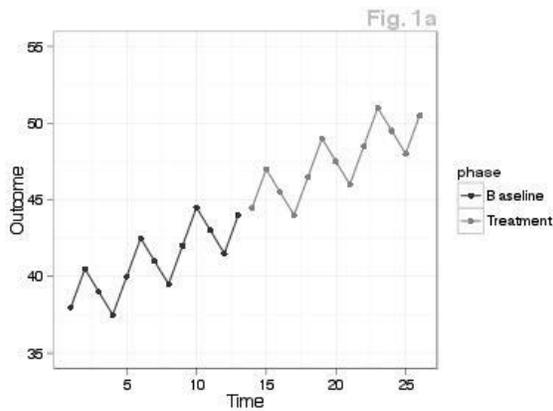
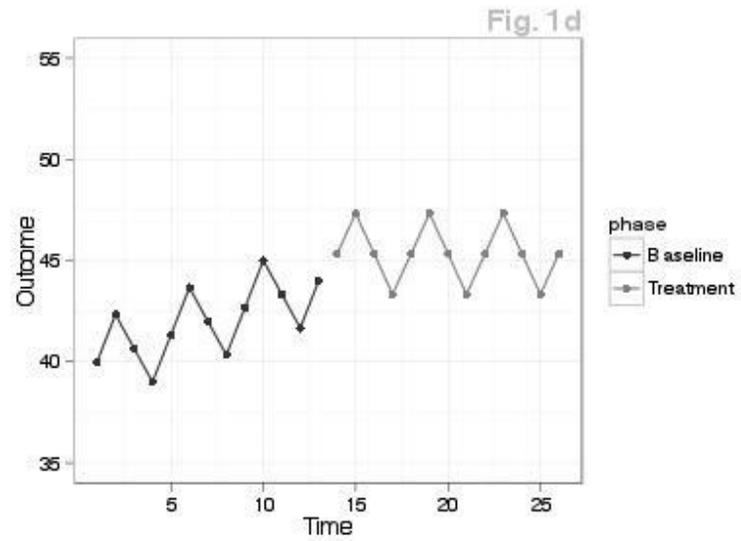
O1 – BASE: What does the users do?

- The BASE's users can:
 - collect students and teachers data in everyday school life;
 - monitor the effectiveness of PBS interventions according to an evidence-based approach;
 - easily generate **reports** about the data collected with the application.

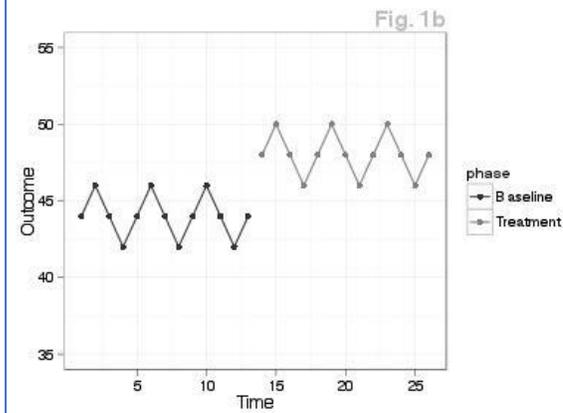
Categories of potential features:

- To evaluate the well-being status of teachers and students (i.e. rating, emotional thermometer, or visual analog scales);
- to collect information about academic progresses such as discipline referrals, attendance reports, etc.;
- to let the teachers to easily build measures to assess for instance the students engagements or comprehension.

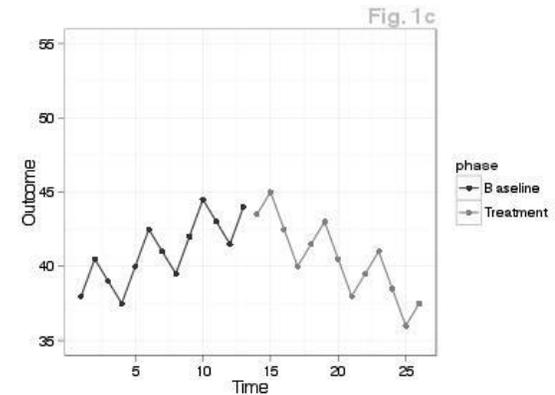
DISENTANGLING THE TREATMENT EFFECT IN A SINGLE CASE DESIGN



NATURAL TREND



EFFECT OF TREATMENT ON OUTCOME LEVELS



EFFECT OF TREATMENT ON THE OUTCOME SLOPES

Analysis of Single Cases

Visual Analysis

Statistical Analysis

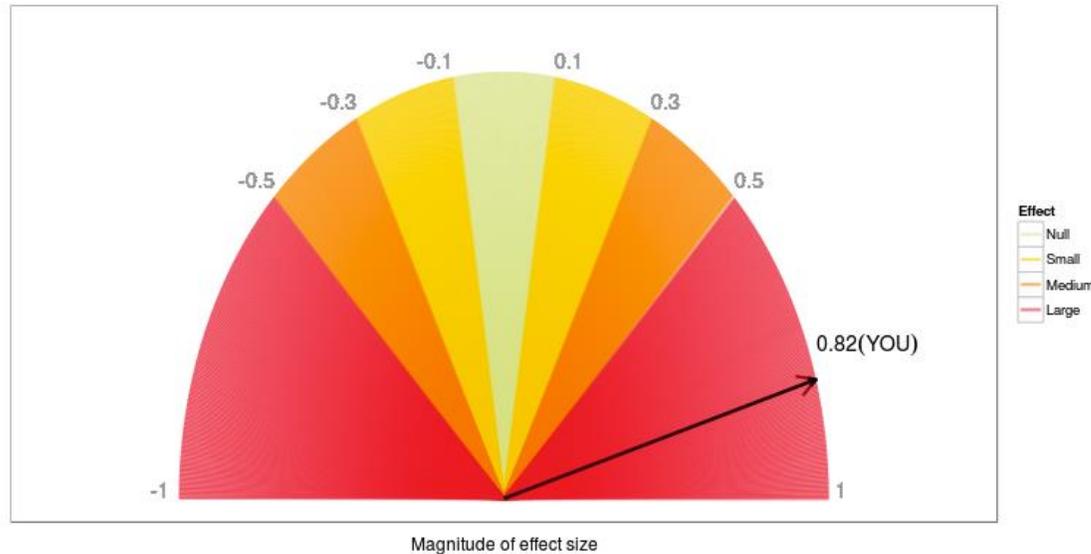
Parametric Methods

Nonparametric Methods

Regression Based Models:
Allison et al. (1993).
- More power only if assumptions are met
- BEHAVE

Nonoverlapping Models:
Tau_U. (Parker et al., 2012).
- No assumptions
- BEHAVE AND WHAAM

Two kinds of output



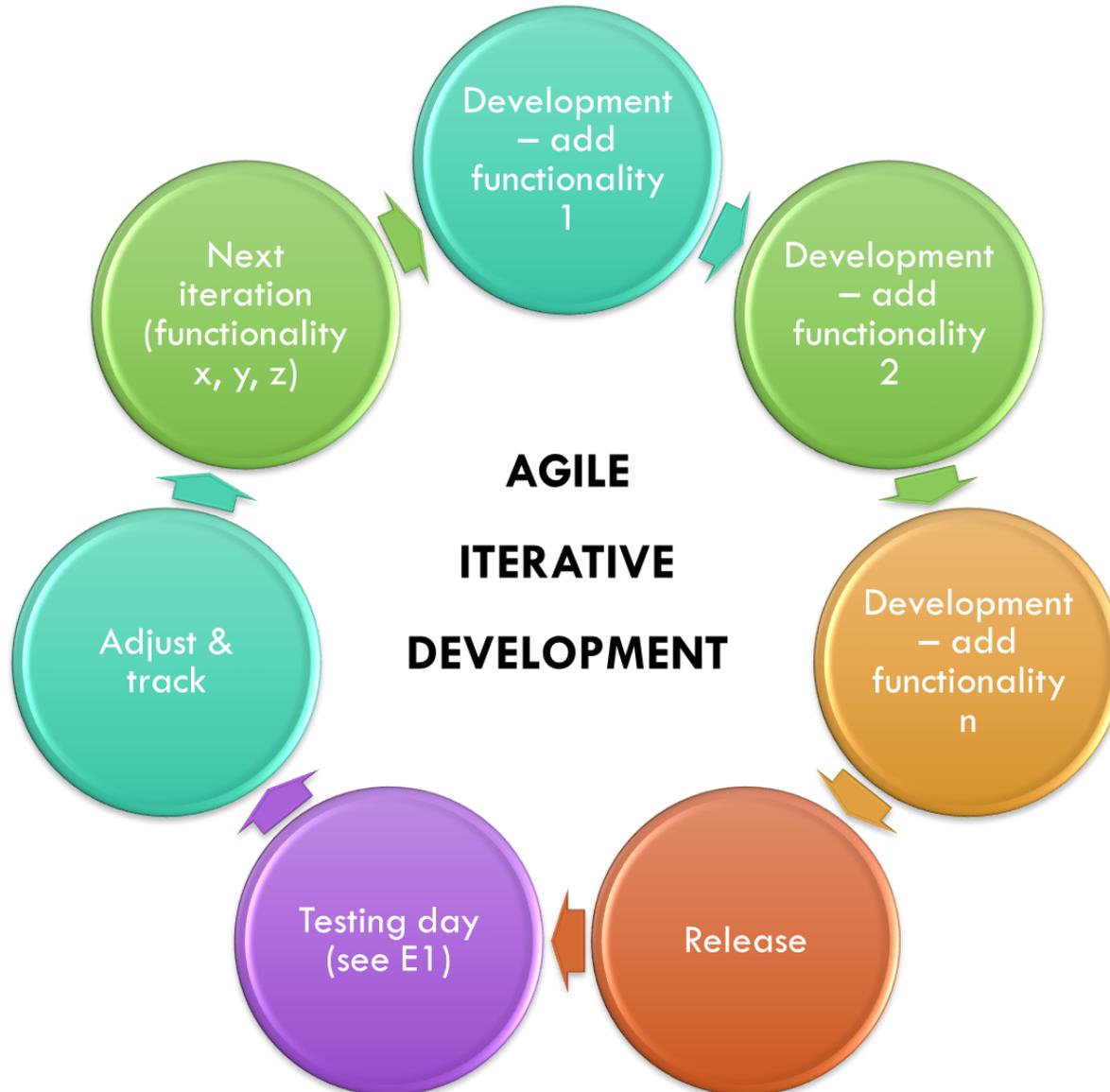
Fast and easy:
thermometer

TAU_U Analysis

	A vs. B	A vs. B + TREND B	A vs. B + TREND B - TREND A
n pairs	400	590	780
n pos	364	424	496
n neg	0	72	132
S	364	352	364
Tau	0.91	0.597	0.467
SDs	72.097	77.989	83.467
VARs	5197.949	6082.308	6966.667
Z	5.049	4.513	4.361
p(Z based)	0	0	0
r Effect Size	0.99	0.806	0.67

Full and more
complex output

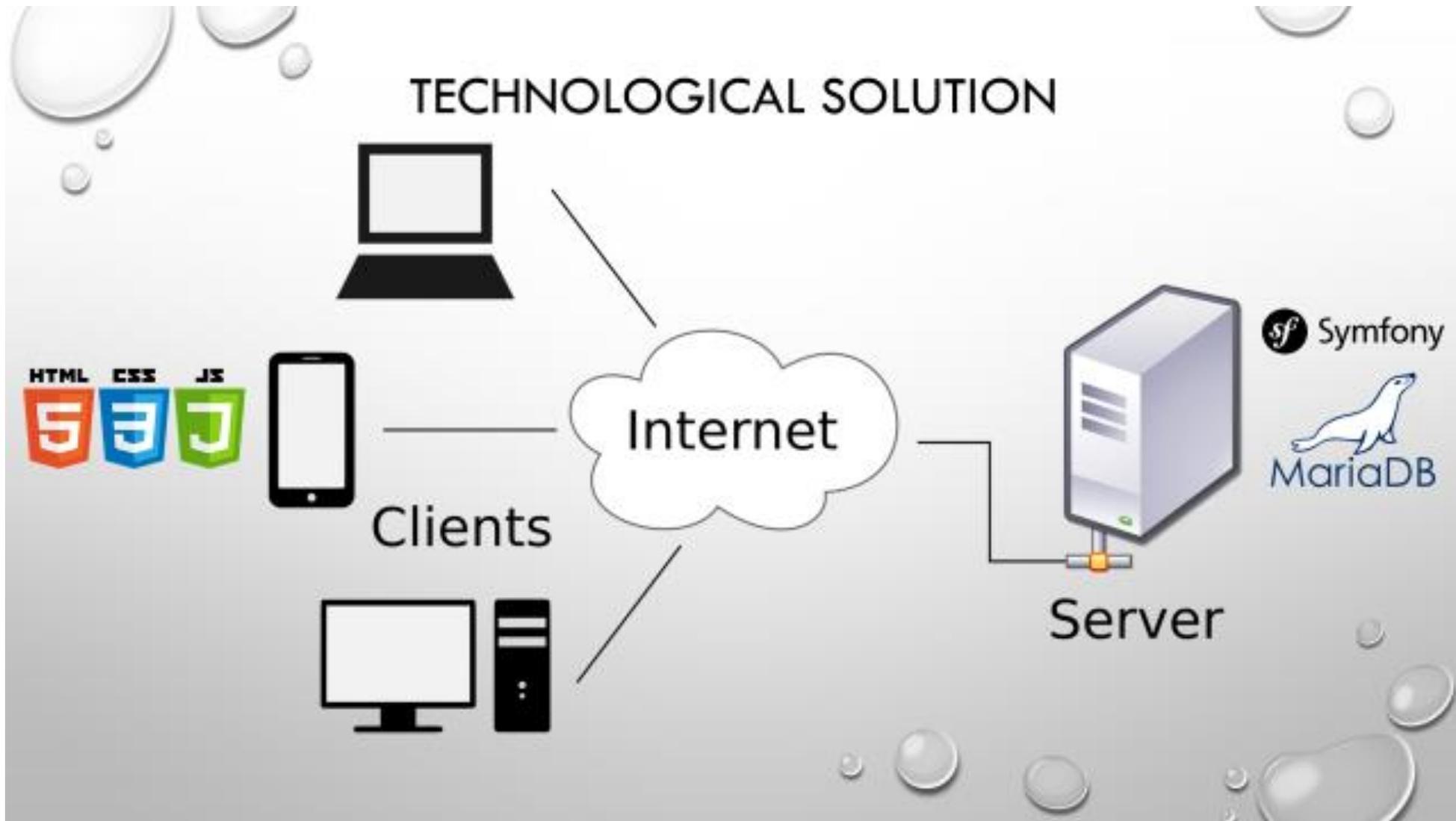
O1 - BASE: Development of the BASE application – How to organize the development process?



Start date	01-09-2017
End date	28-02-2019
Leading organization	ITD
Participating organizations	UNIPA, PORTO Politecnico, Stichting VU, UCD

One website fits to all screens





Thank you!

"Nothing could be more absurd than an experiment in which computers are placed in a classroom where nothing else is changed"

Seymour Papert

