



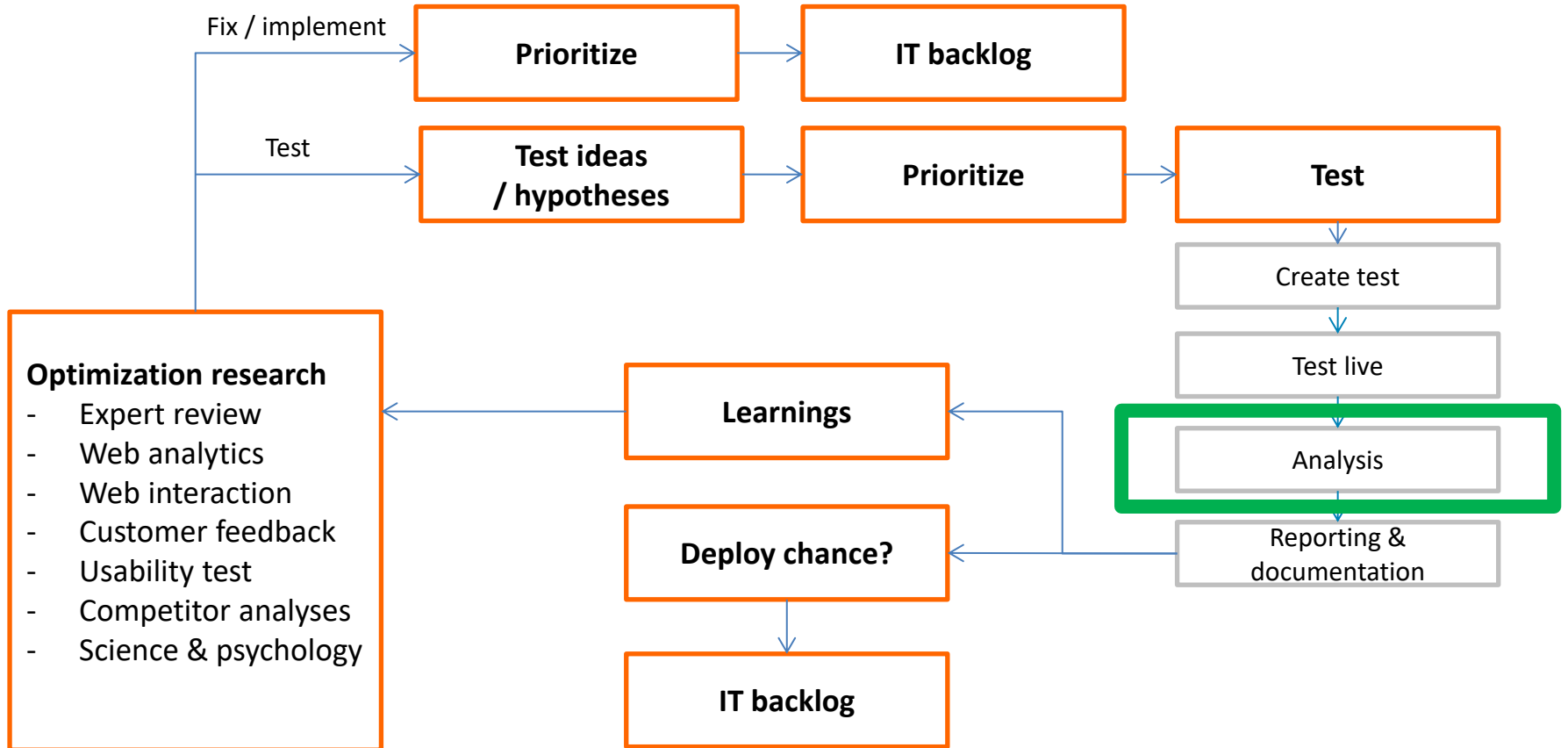
SECTION 7: ANALYZE THE TEST

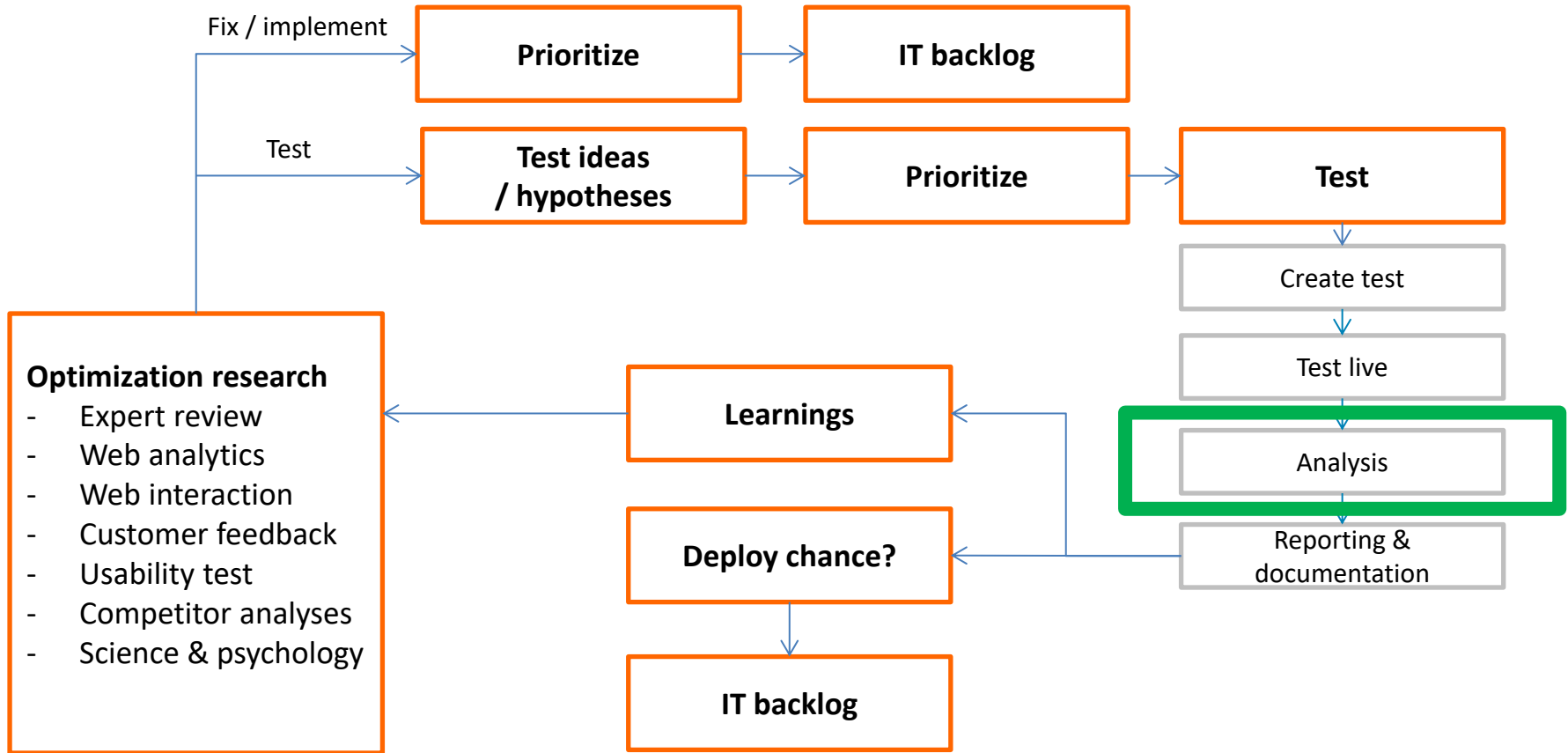
The Complete Conversion Optimization course
Ruben de Boer - conversionideas.com



WHEN TO START ANALYZING

SECTION 7: Analysis





Stop the test

- When you reached the test duration
- And when you have the expected number of visitors in your data

Stop the test

- Never stop a test before you reached the test duration and test size
- Unless the test performs extremely poor or causes a bug



Conversion Ideas

Become a Conversion Optimization expert

FREQUENTIST VS BAYESIAN

Frequentist vs Bayesian

- Frequentist: statistical significance
- Bayesian: simulation to calculate the chance a variation will beat control

Frequentist vs Bayesian

Measured in test

		Variation is not better	Variation is better
Reality	Variation is not better		
	Variation is better		

Frequentist vs Bayesian

Measured in test

		Variation is not better	Variation is better
Reality	Variation is not better		
	Variation is better		Correct decision

Frequentist vs Bayesian

Measured in test

		Variation is not better	Variation is better
Reality	Variation is not better	Correct decision	
	Variation is better		Correct decision

Frequentist vs Bayesian

Measured in test

		Variation is not better	Variation is better
Reality	Variation is not better	Correct decision	Type I error False positive
	Variation is better	Type II error False negative	Correct decision

Frequentist

- Looks at statistical significance
- If you put the confidence level too high, you will have a lot of false negative

Measured in test

		Variation is not better	Variation is better
Reality	Variation is not better	Correct decision	Type I error False positive
	Variation is better	Type II error False negative	Correct decision

Bayesian

- Calculates the chance a variation will beat control
- Likely to result in:
 - more variations declared as winner
 - less false negatives (don't miss out on money)
 - more false positives (very low risk with sufficient test data)

Measured in test

		Variation is not better	Variation is better
Reality	Variation is not better	Correct decision	Type I error False positive
	Variation is better	Type II error False negative	Correct decision

Frequentist vs Bayesian

- Frequentist: Hard to explain to stakeholders
 - Statistical significance
- Bayesian: Much easier to explain to stakeholders
 - Chance variation will beat control (0-100%)

Bayesian

Exceptable Bayesian probability to declare test winner:

- Depends on how much risk you want to take
- Depends on business case

SEGMENTING TEST RESULTS

Segmenting

- Use segments to get extra insights in your test data
 - Device
 - Browser
 - Mobile phone brand
 - Traffic source
 - New vs returning visitors
 - Location
 - Time of day
 - Day of week

Segmenting

- When you use segments, make sure you have sufficient data for each segment

Segmenting

- Use segments for extra insights and learnings
- When using segments
 - Make sure you have sufficient data for each segment
 - When you find a test winner for a specific segment, you could run the test again for that segment to make sure your results hold