Gaming Software: Pros and Cons of a Mature Testing Approach

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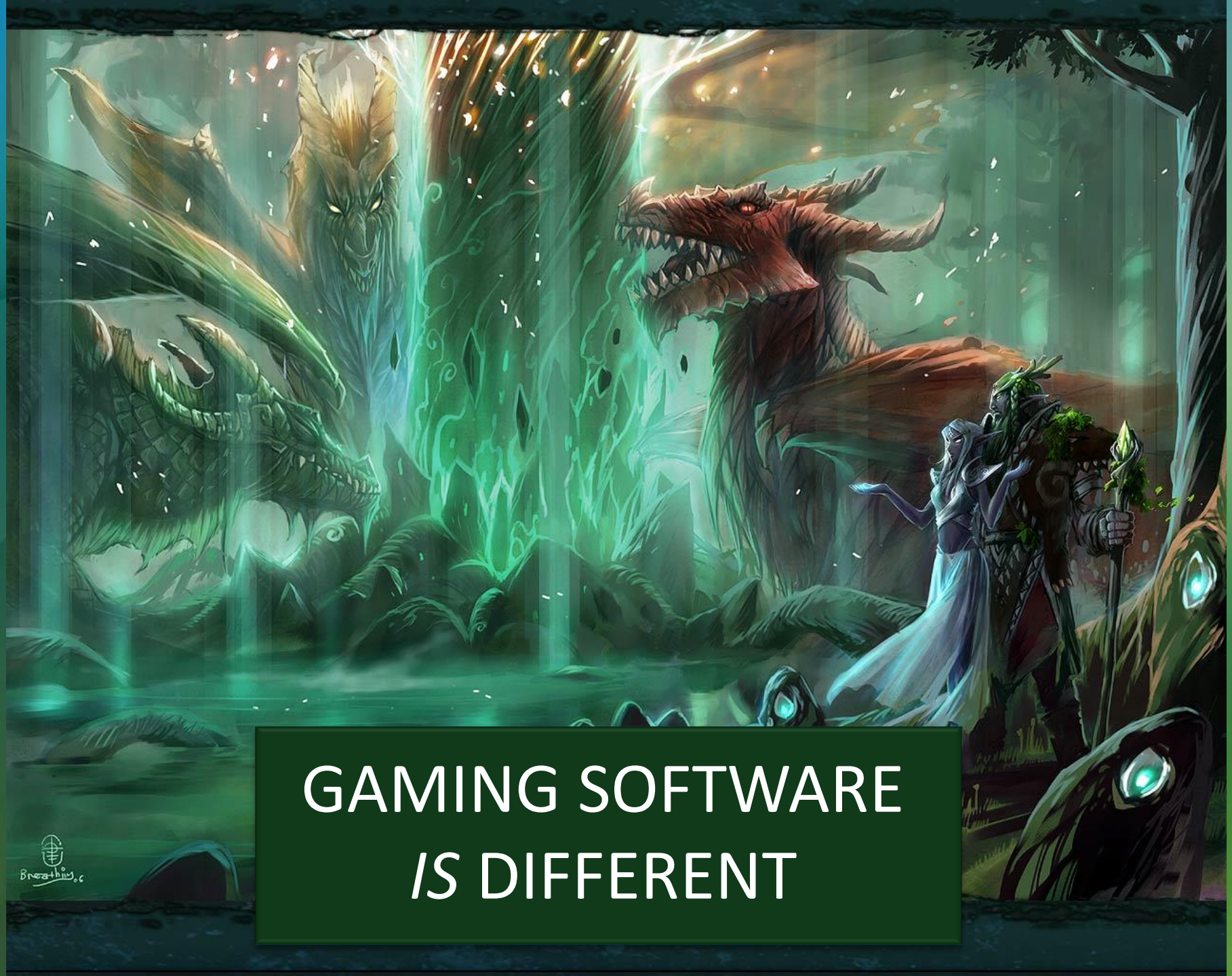


GAMING SOFTWARE *IS* DIFFERENT

How is gaming software different?

- Software tends to be highly complex
- Functionality is deep with concurrent activities
- Usability is critical
  - How does one test for “fun”?
  - Attractiveness is critical in the competitive market
  - Learnability is important to attract new customers
- Performance/load (new version of WoW?)
- Security, localisation, …
- Highly competitive market with schedule pressure

TWO SCHOOLS OF THOUGHT

Use DOTS to do the majority of the testing

Use experienced, trained and certified testers

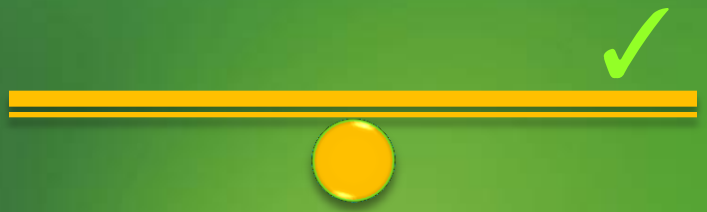
PROS and CONS: MATURITY

DOTS

- Less maturity
- May not have job experience
- Little or no testing experience
- May not have the organisation skills you need
- Bring energy and product interest/expertise
- Enthusiam

Experienced Tester

- More maturity in the workplace
- Job experience of varying years and situations
- Formal testing experience and training
- Organisation skills will have been built out of necessity in other jobs
- May lack enthusiasm for the gaming industry



PROS and CONS: TERMINOLOGY

DOTS

- Little knowledge of testing terminology, will not be able to help with standardisation
- Great knowledge of gaming terminology

Experienced Tester

- Excellent knowledge of testing terminology – can build a glossary for the organisation
- Little knowledge of gaming terminology and may lose credibility with developers as a result

PROS and CONS: TECHNIQUES

DOTS

- No knowledge of standard testing techniques – will have to be taught (by whom?)
- Good knowledge of use cases and could build use case based tests
- Able to apply exploratory testing, but may lack understanding of documentation requirements

Experienced Tester

- Good knowledge of testing techniques and able to apply these to any environment. Also able to train others.
- Building use cases might prove difficult but can test from developed use cases
- Able to apply experience-based techniques

PROS and CONS: NON-FUNCTIONAL

DOTS

- Non-functional testing requires specific skill sets which will not be available
- Programming skills may or may not be available
- Usability testing may be easier for a gamer, but will lack formalised approach
- Can test for “fun” and know what it is

Experienced Tester

- Non-functional testing skills are available and have been practiced at other organisations
- Specific skills in performance, security, usability can be hired
- Usability testing may be difficult if not a “user”
- Everyone knows the experienced tester never has fun!

PROS and CONS: RESPECT

✓

DOTS

- Tendency toward less professionalism based on less workplace experience
- Less professionalism may be an expectation, depending on environment (and ability with a Nerf gun)
- Ability to speak the gaming language enhances impression of knowledge and experience

Experienced Tester

- Even people with lots of experience and training sometimes lack the ability to gain respect, so it isn't a guarantee
- May be a concern that the person isn't a good "fit" for the organisation

PROS and CONS: TRAINING

DOTS

- Testing ➡ full training needed
- Domain ➡ minimal training needed
- Organisation ➡ full training needed
- Advanced techniques ➡ full training needed

Experienced Tester

- Testing ➡ no training needed
- Domain ➡ full training needed, but should be able to adapt quickly
- Organisation ➡ some training needed but should be able to adapt quickly
- Advanced techniques ➡ no training needed

PROS and CONS: LIFECYCLE

DOTS

- Any lifecycle will be unfamiliar so training and understanding of involvement will be needed
- Person may not adapt well to lifecycle in use – unknown
- Lifecycle may require technical skills such as test automation that the person won't have
- Ability to learn advanced skills may be inhibited by lack of foundation

Experienced Tester

- Lifecycle knowledge should be transferrable to this environment
- Technical skills should be readily applicable based on experience
- Training in advanced skills should be built upon a solid foundation of skills

PROS and CONS: QUALITY

DOTS

- Lower quality due to less structured, mature approach
- Lower quality documentation
- Higher incident of test escapes
- Slower and less efficient progress due to not applying testing techniques
- Test concentration errors due to not understanding the code and inherent risks

Experienced Tester

- Higher quality due to more structured techniques
- Re-usable tests, better documentation even for exploratory
- Better identification and documentation of defects
- Faster and more efficient progress
- Better or at least known coverage

PROS and CONS: COST

DOTS

- Cheap!
- No investment made
- Longevity likely limited
- Expect high maintenance costs and re-work costs due to missed defects

Experienced Tester

- More expensive in terms of salary
- Better use of money depending on needs
- Better resultant quality resulting in lower maintenance costs
- Savings on re-testing

PROS and CONS: MANAGMENT

DOTS

- May introduce management challenges due to less experience in the work environment
- Less motivated for long-term testing career
- Testing may be seen as a stepping stone to a more glamorous producer job
- Training investment may be lost if retention is low
- May be difficult to motivate once the “fun” wears off

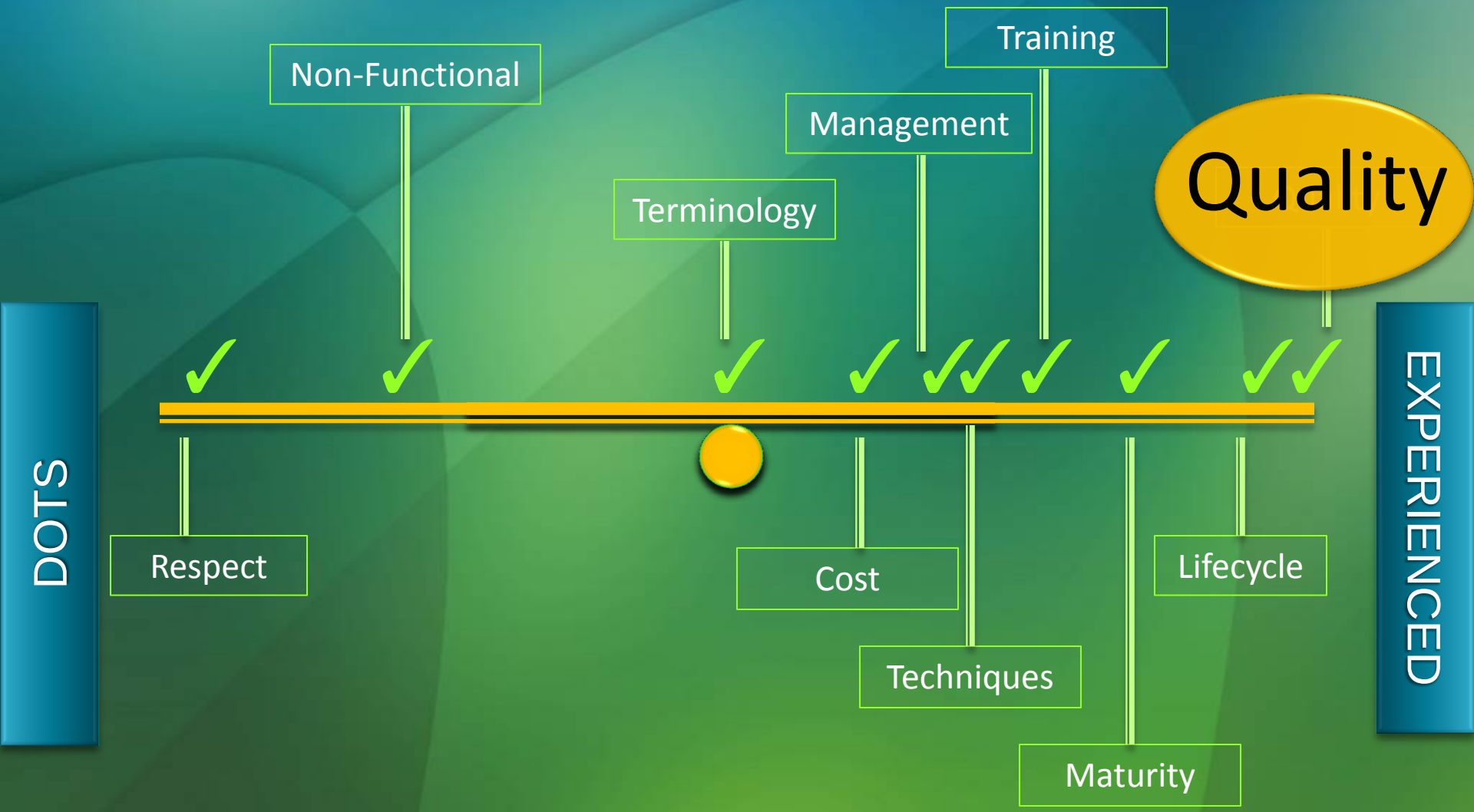
Experienced Tester

- Experienced professional, should be manageable
- Already decided on a testing career
- May not be able to provide the career progression needed for retention
- May feel alienated if not a good fit for the environment
- May not be adept at dealing with game producers vs developers in other industries

WEIGHTING NEEDED

- Do defects matter?
- Is time to market more critical than coverage?
- Is quality not a priority because users are tolerant?
- Are performance, security, and usability priorities?
- What about test automation?
- Do experienced testers guarantee a mature approach?
- Do DOTS preclude using a mature approach?
- Is a hybrid team an option?

Where's the happy balance?



QUALITY TIPS THE SCALE

- What's the best tester for the gaming industry
  - One with experience
  - One with training
  - One who stills sees the fun in testing
  - One with maturity who can still fit in
- Foundation level certification sets the baseline
- Agile training probably helpful

Using a Hybrid Team

DOTS

- Devise realistic usage scenarios
- Assess attractiveness, learnability and FUN

Experienced

- Structured approach
  - Analyse risks
  - Define tests
  - Apply tools
- Re-usable testware
- Approach testing as a profession
- Long term view of testing and artefacts
- Application of efficient test techniques
- Application of knowledge

Both?

- Respect
- Enthusiasm
- Interest
- Long term commitment

Mix Your Team

- Use experienced folks to guide and lead
- Use DOTS for what they are good at – UAT
  - Provide guidance – don't allow this to take over
  - Good testing requires discipline
- Use entry level testers (grads, interns, self-taught)
  - Let them learn from the experienced folks
  - Apply them to the formal testing work

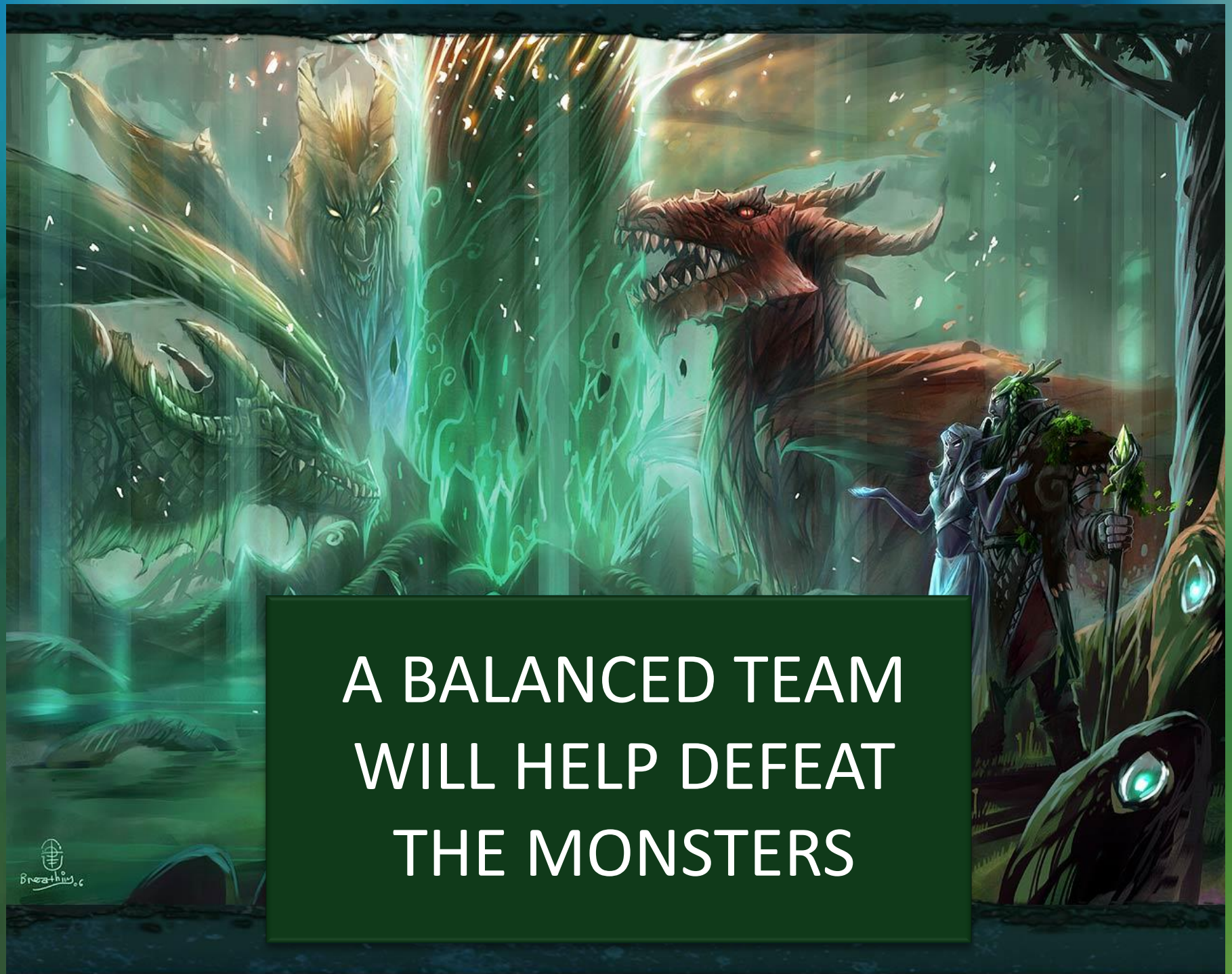
30 DOTS <> 30 Experienced Testers
30 DOTS = 5 Experienced Testers + some test executors

What about the specialties?

- Consider your volume needs
- How often do you do performance testing?
  - Do you need a dedicated team?
  - Do you need a dedicated individual?
  - Do you need someone you can bring in periodically?
- Hire for your average need
  - Use consultants/contractors for the peaks
  - Bring in the experts when you need experts

Quality Matters, but Cost Is Real

- Balance your team
- Favour experienced testers
- Plan to develop qualified entry level people
  - Interested in gaming
  - Planning on a career in testing
  - Trainable on techniques
- Don’t let the testing process devolve into chaos
  - Keep a professional focus
  - Apply effective techniques
  - Use industry tools
- Develop or contract specialists


A BALANCED TEAM
WILL HELP DEFEAT
THE MONSTERS

Questions?