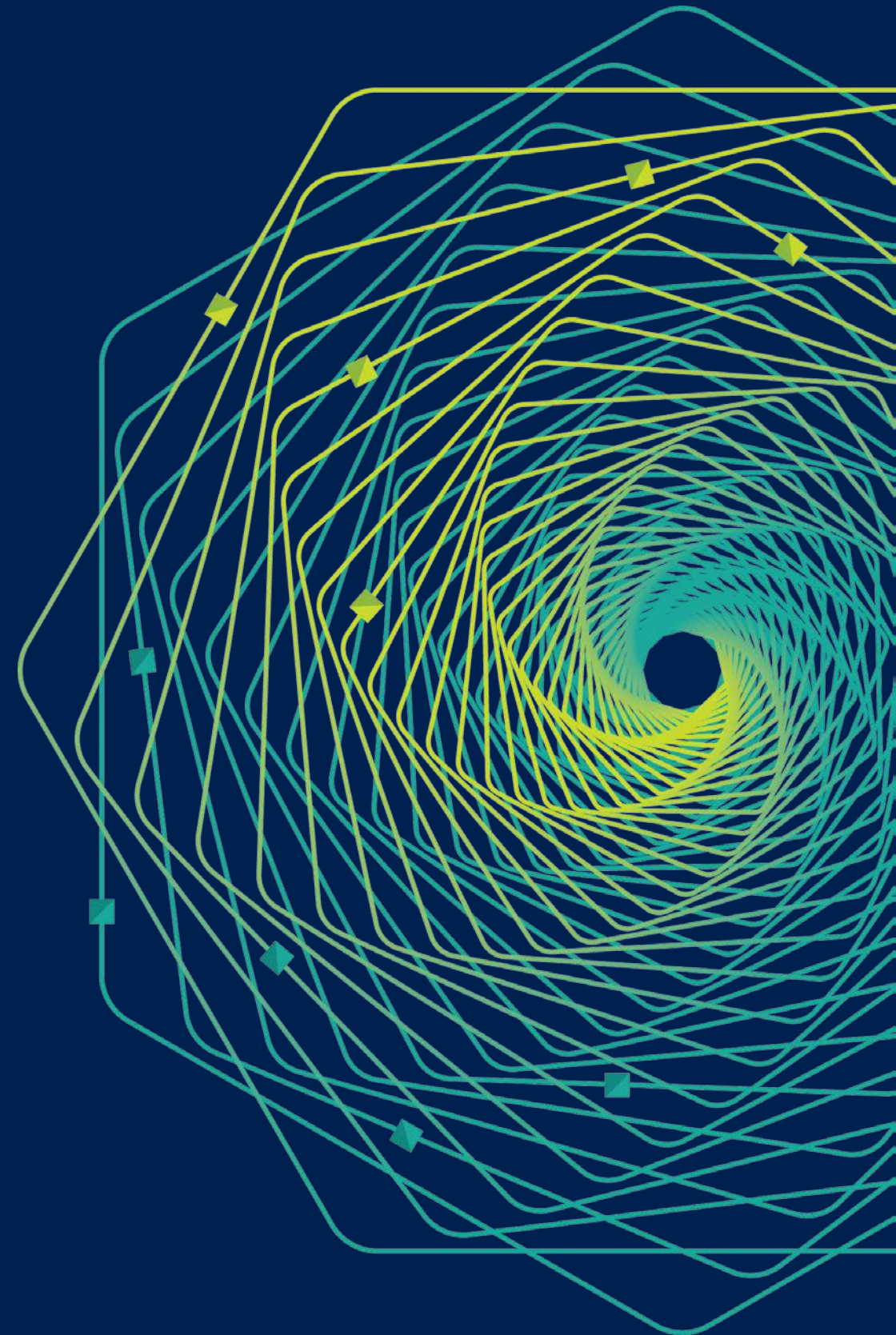




Research Faculty Summit 2018

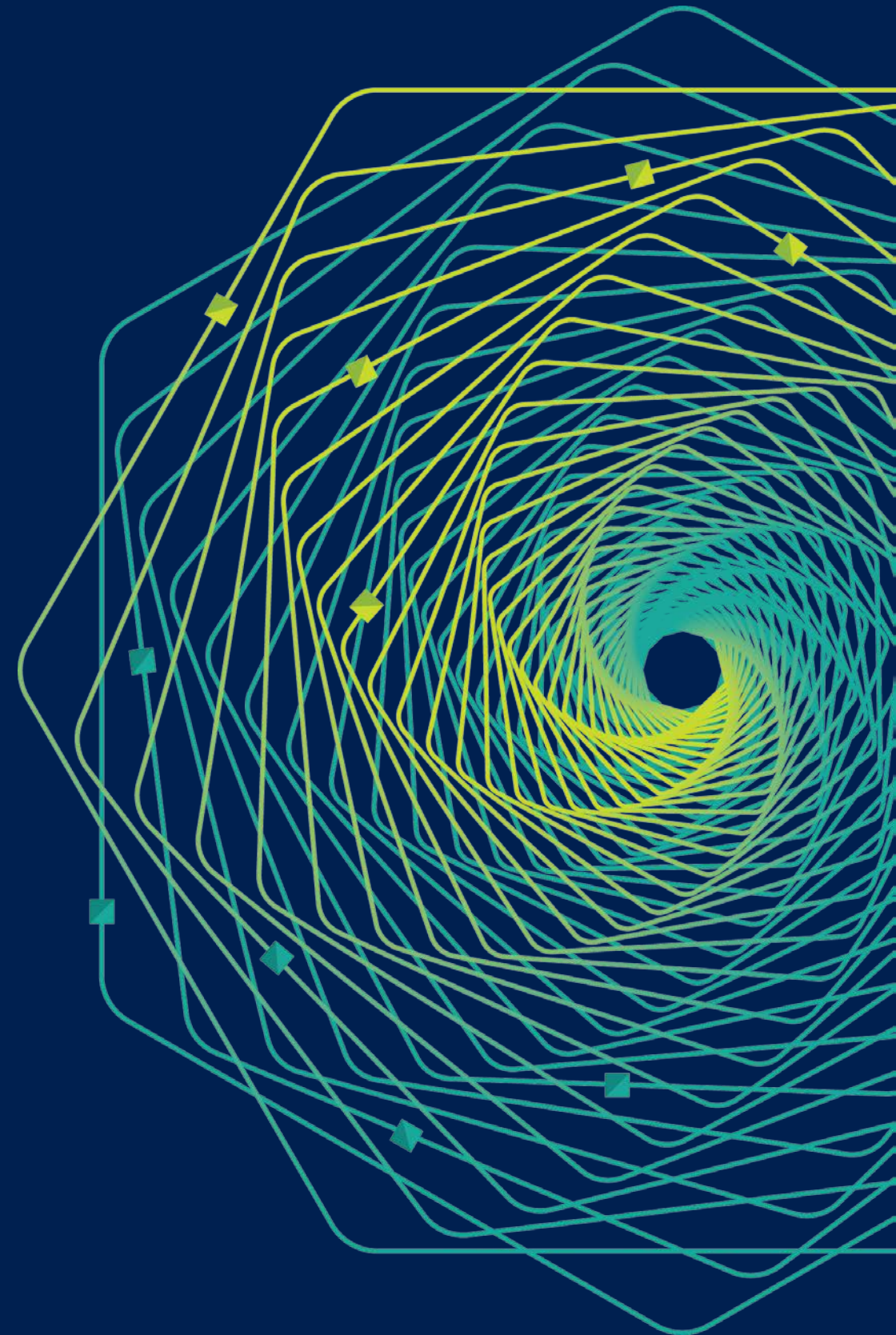
Systems | Fueling future disruptions



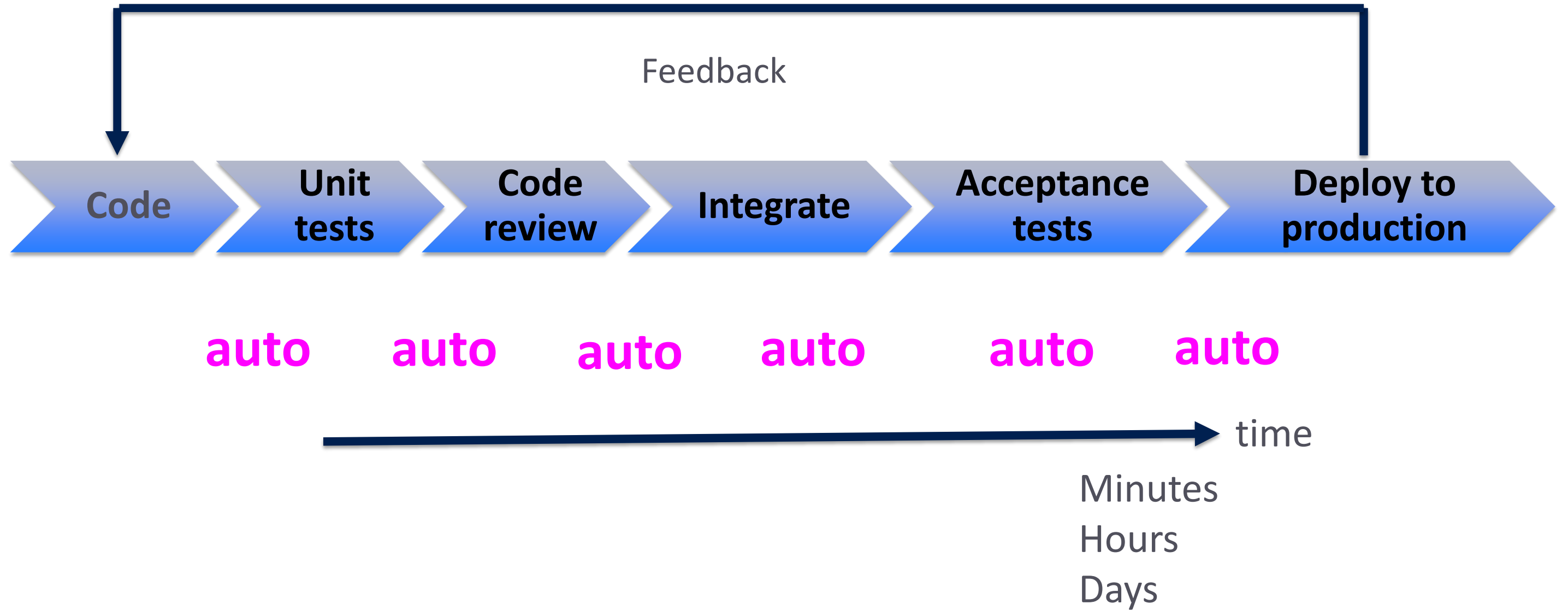
Challenges in Continuous Deployment

Laurie Williams

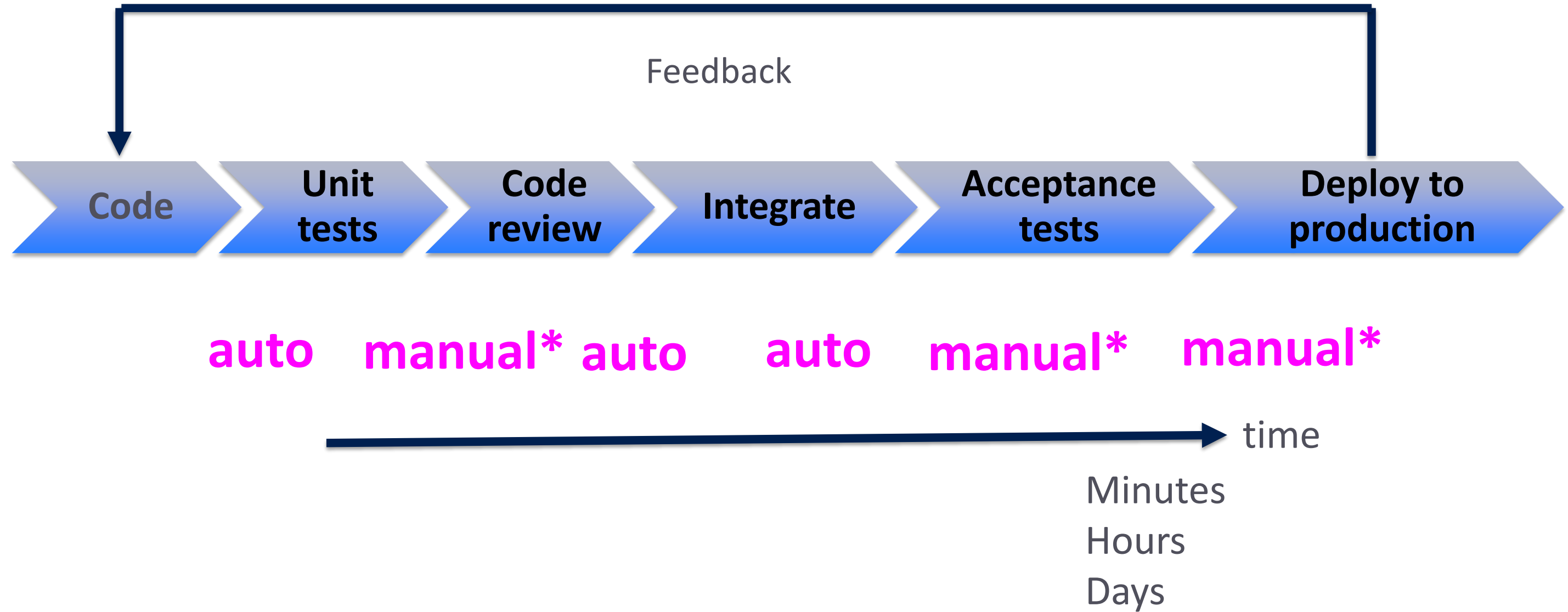
Distinguished Professor and Interim Department Head,
North Carolina State University



What is continuous deployment?



What is continuous development?



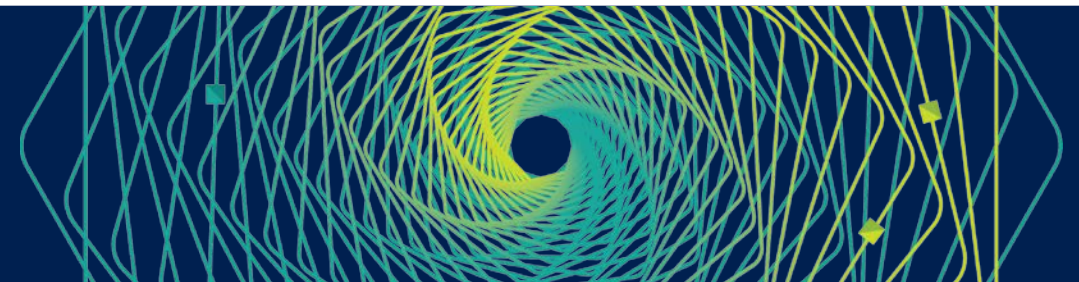
* Some manual processing, the choices of manual were chosen randomly on this slide

Continuous Deployment Summit 2015-2018

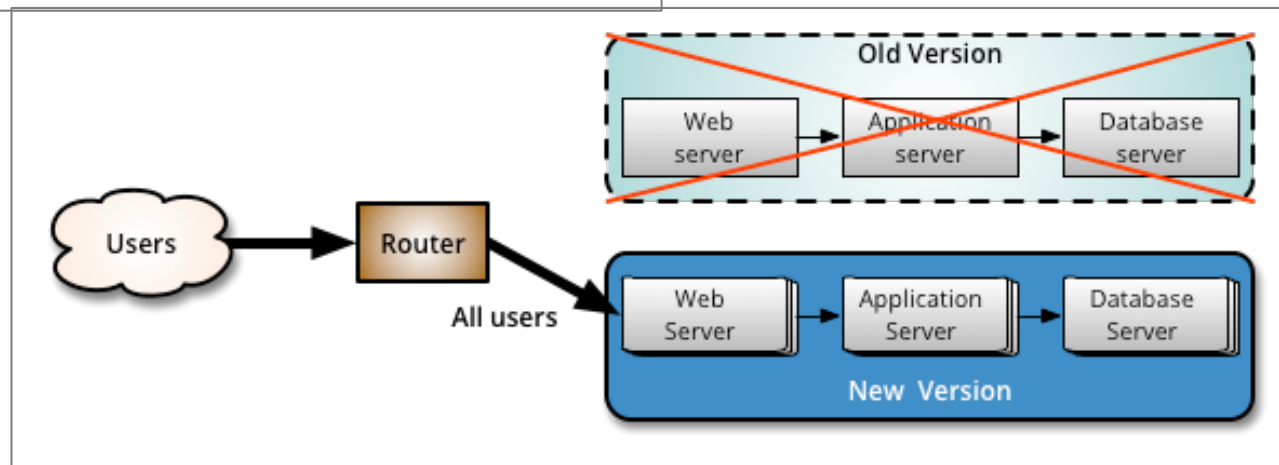
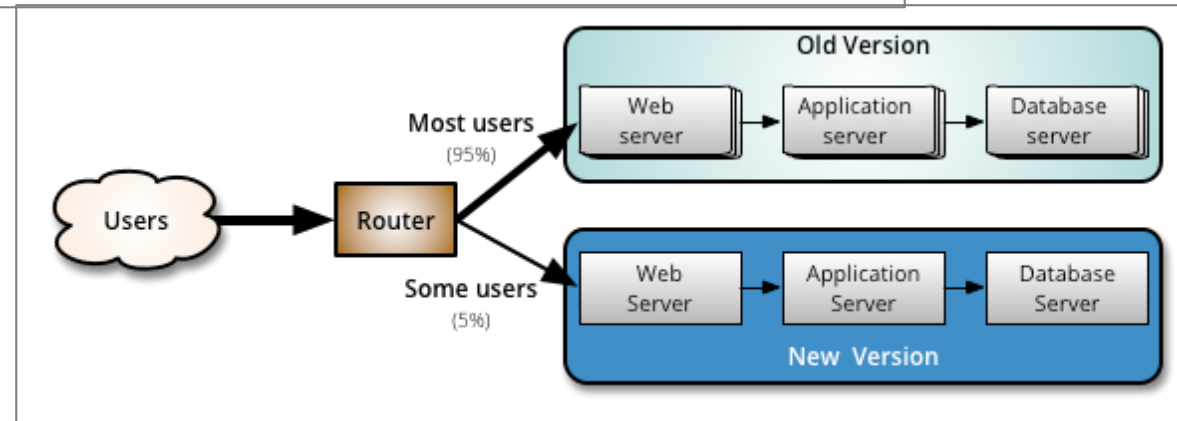
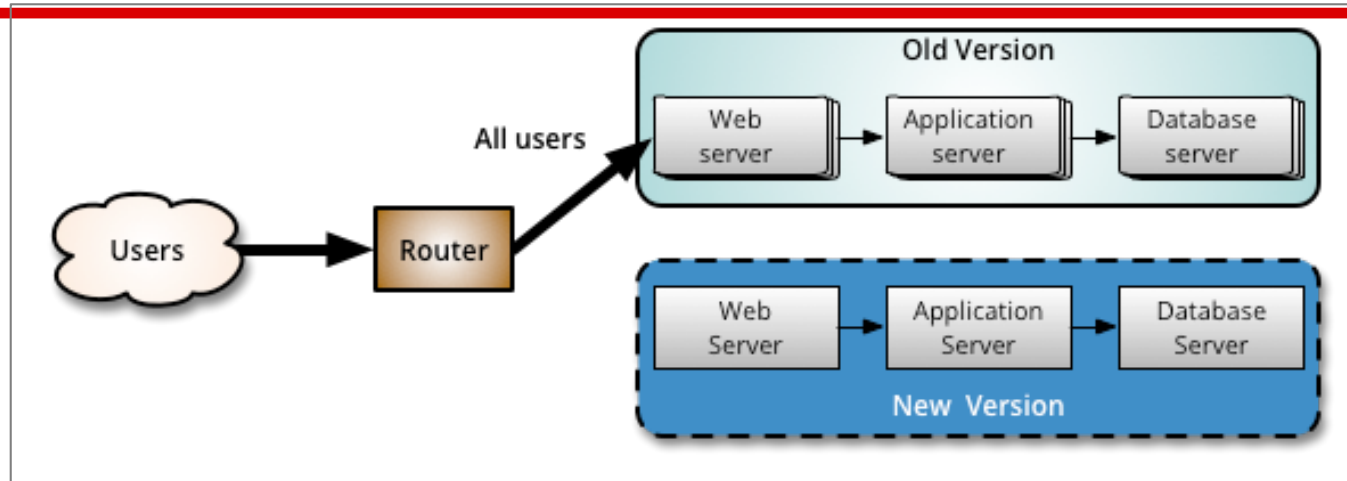


Benefits of Continuous Deployment

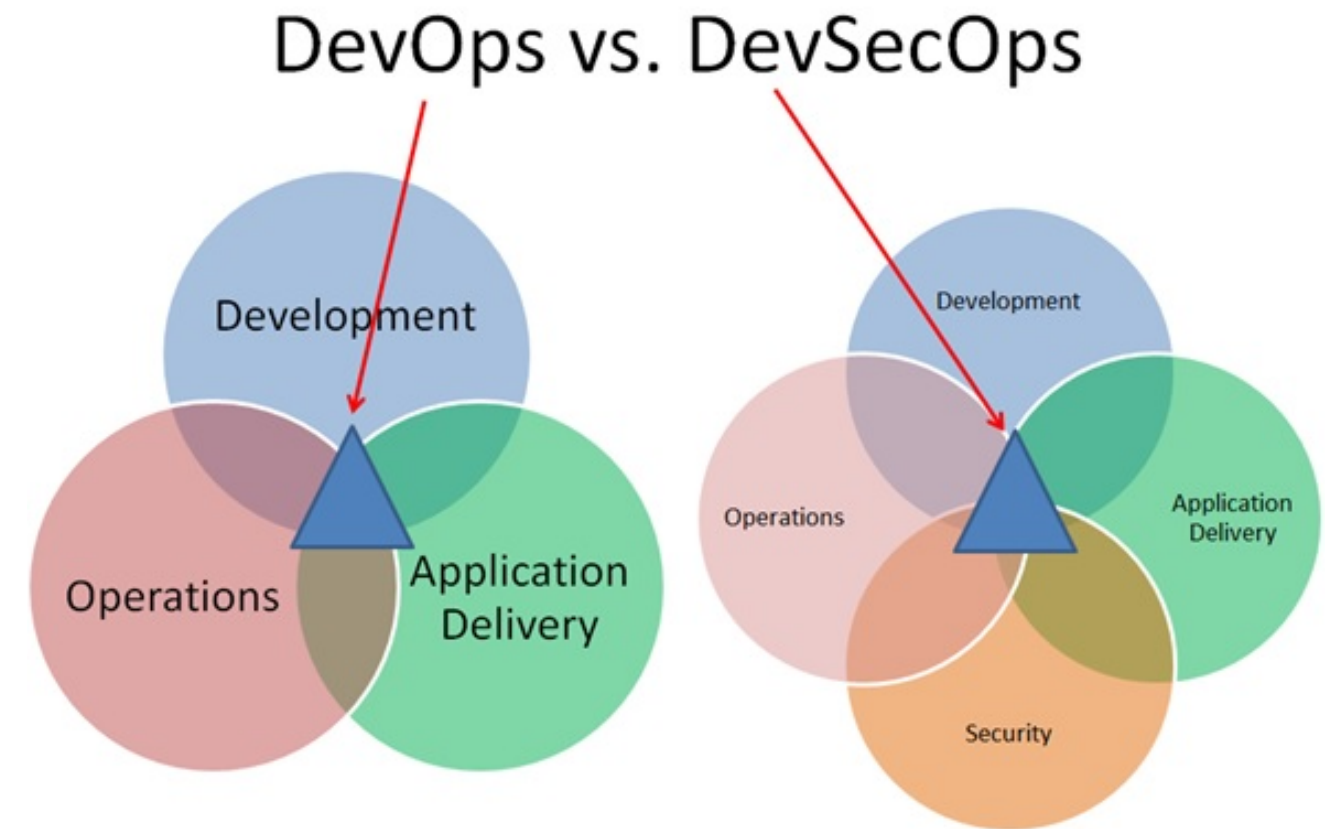
- More frequent releases ready for promotion on a regular cadence
- More developer empowerment/self-service/satisfaction
- Quality gains
- Productivity gains
- More automation of supporting processes (scans, checks, etc.)
- Quicker Mean-Time-To-Repair (MTTR) or defect/vulnerability remediation
- Developers can get instant signal about how their code is working in PROD rather than waiting days/weeks



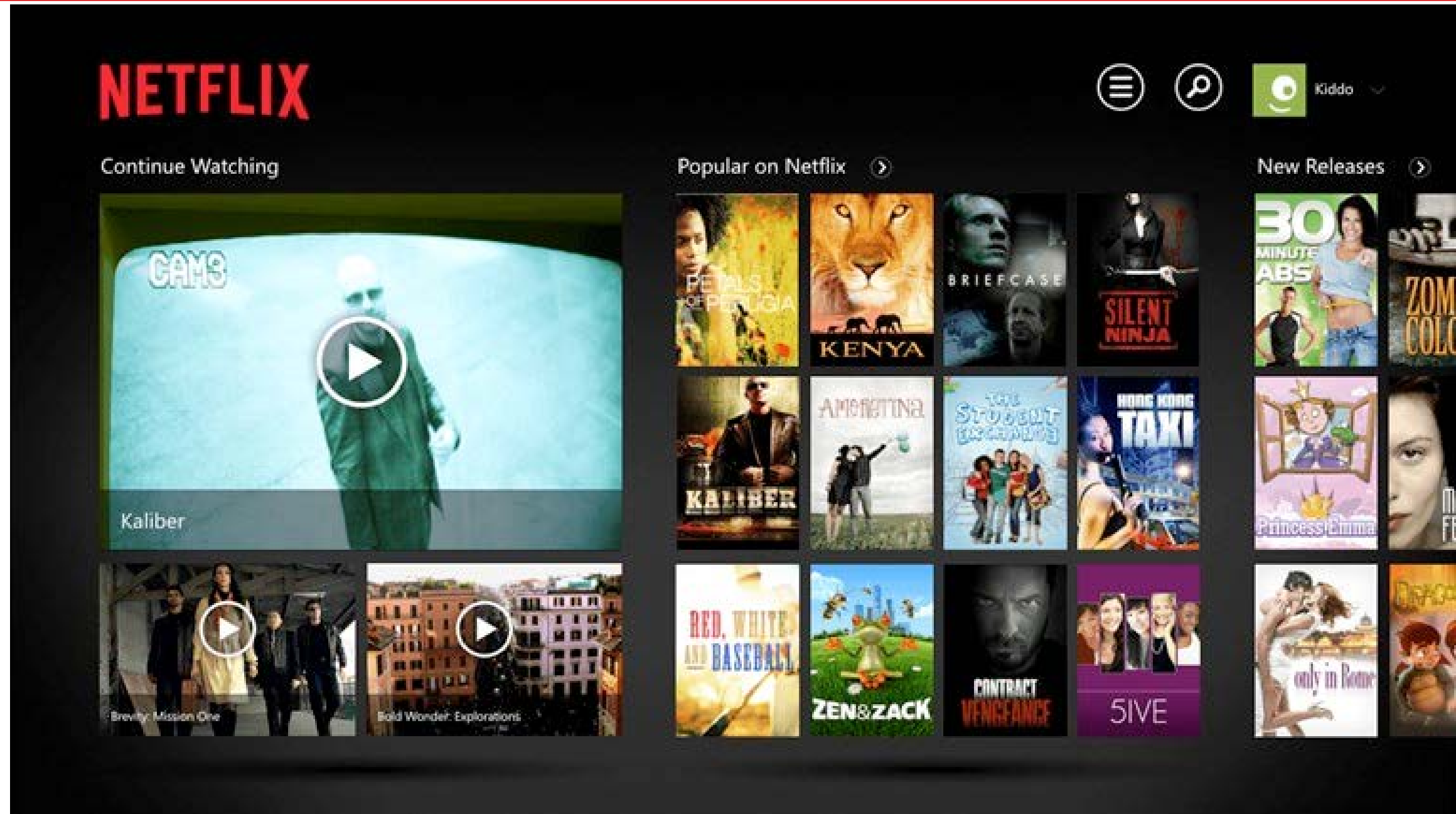
Challenge 1: Database schema, architecture, and other large changes



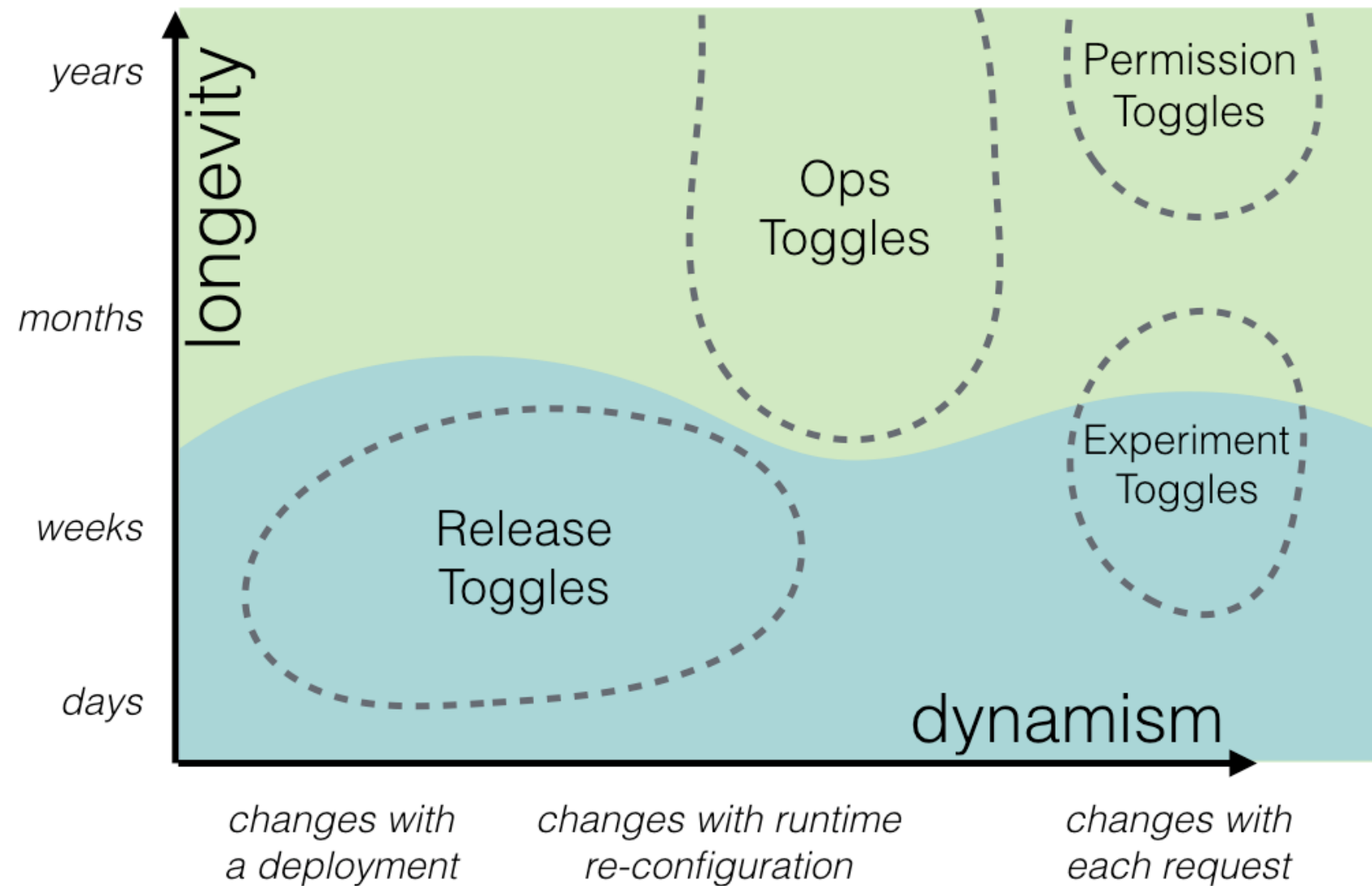
Challenge 2: Privacy and security



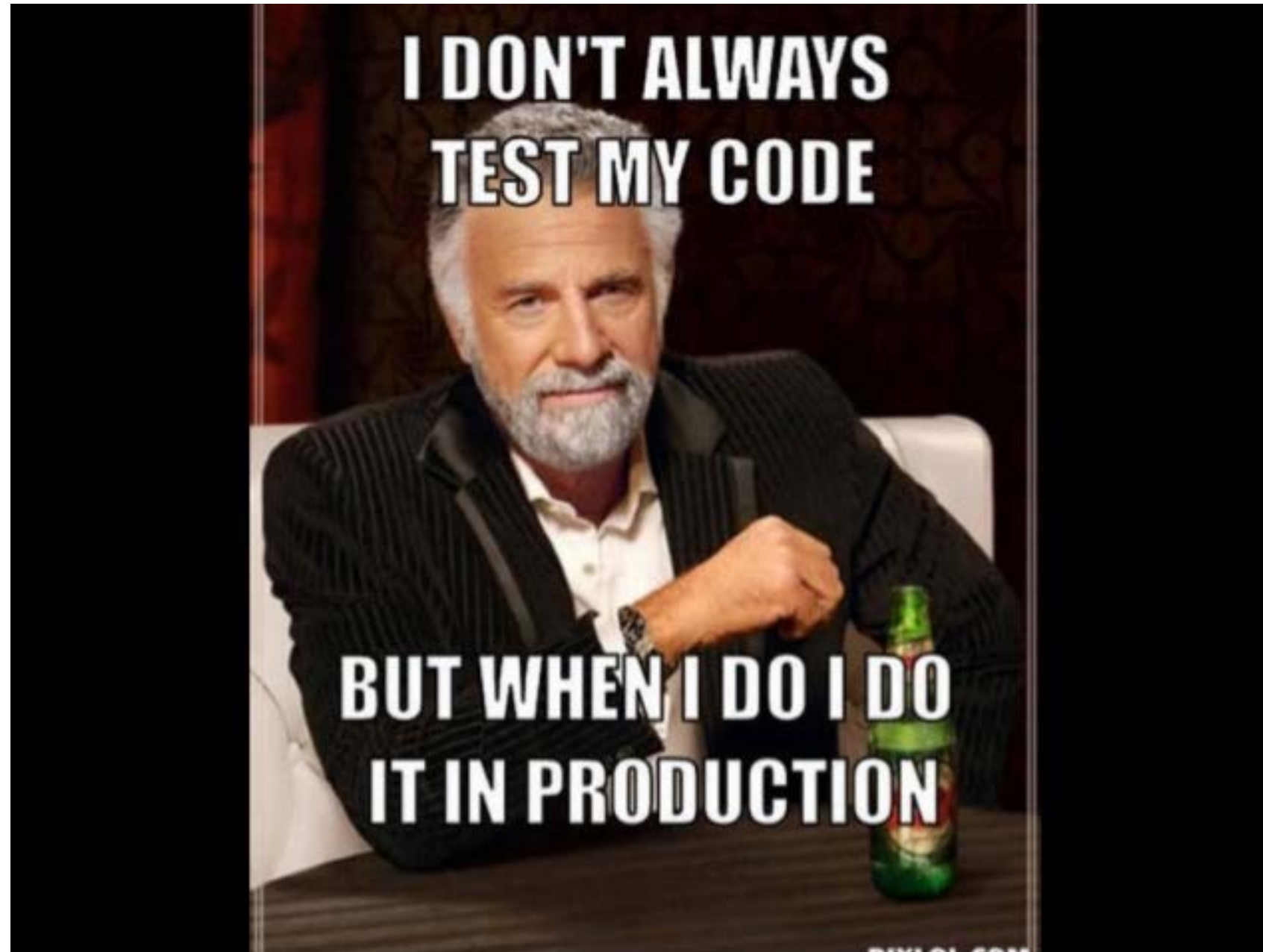
Challenge 3: Costs/complexity of feature experimentation



Challenge 4: Technical debt ... and complexity



Challenge 5: Radically different testing strategies



Challenge 6: Mobile deployment



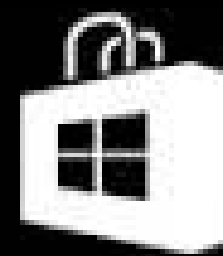
App Store



Google play

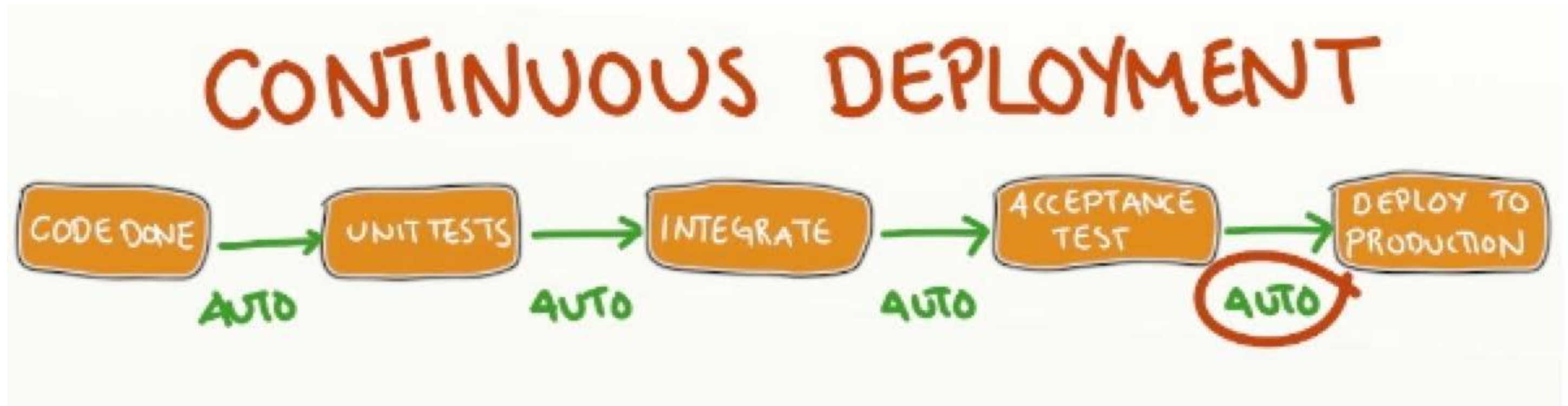


Windows
Phone

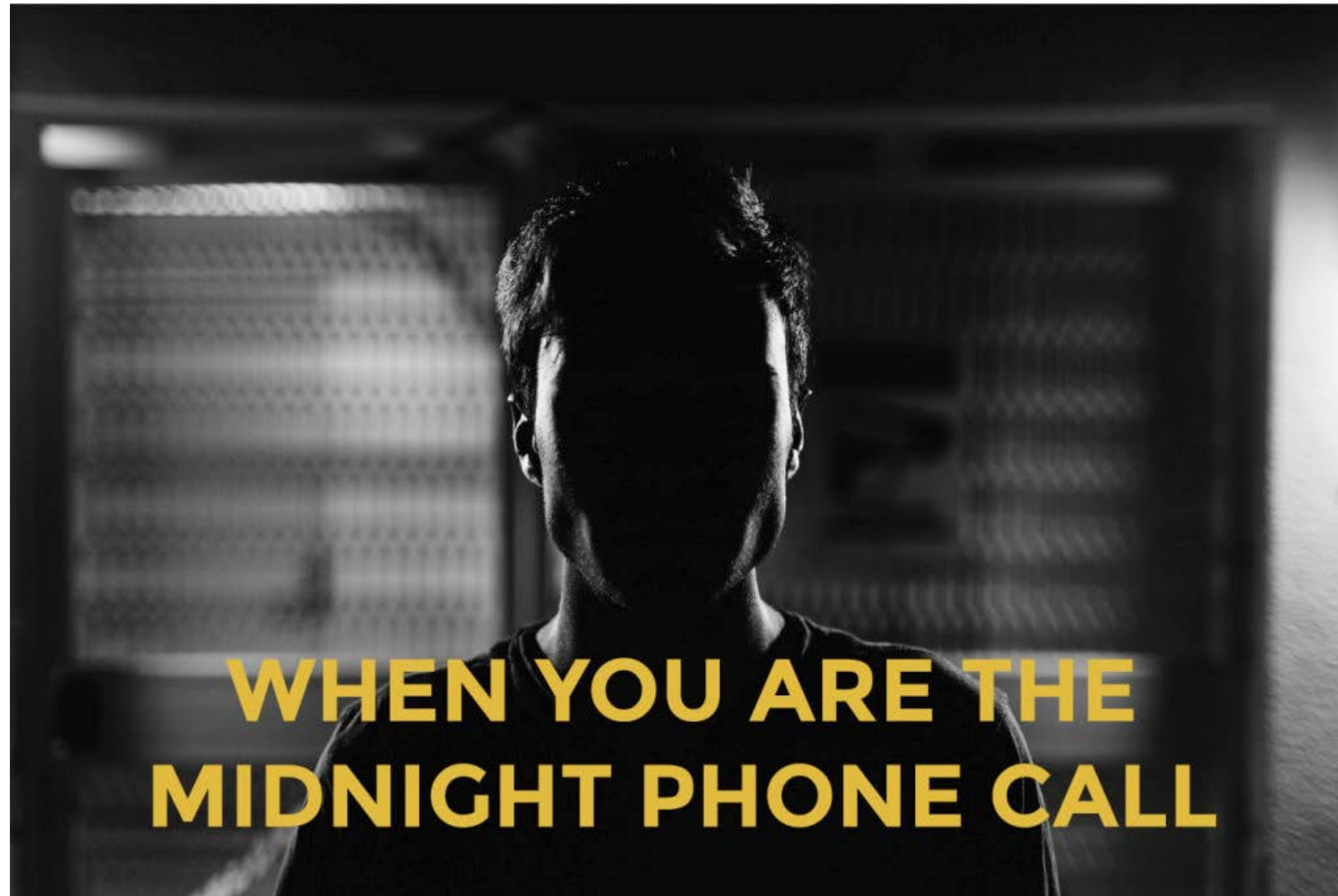


Windows
Store

Challenge 7: Tool investment required

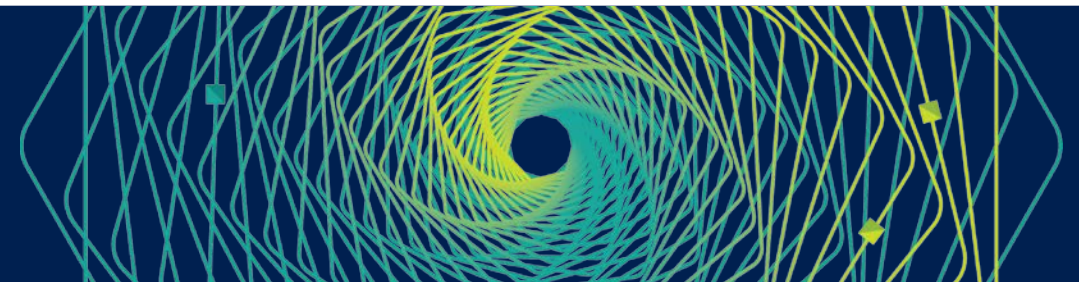


Challenge 8: Major culture shift



Summary: Transition to continuous deployment

- Lots of change “this changes everything”
- Lots of benefits
- Exciting challenges



Images

- <http://blog.crisp.se/2013/02/05/yassalsundman/continuous-delivery-vs-continuous-deployment>
- <http://windows.appy.ninja/netflix>
- <http://visitcolumbusga.com/uploadedImages/BlackShame.jpg>
- <http://chrismcintosh.me/when-you-are-the-midnight-phone-call/>
- <http://martinfowler.com/articles/feature-toggles.html#WhereToPlaceYourToggle>
- <http://blog.crisp.se/2013/02/05/yassalsundman/continuous-delivery-vs-continuous-deployment>
- <http://www.howtogeek.com/218856/how-do-you-disable-the-get-windows-10-icon-shown-in-the-notification-tray/>
- [https://www.dcfcu.org/updates-to-our-mobile-app/;](https://www.dcfcu.org/updates-to-our-mobile-app/)
- <http://www.motortrend.com/news/tesla-model-s-fires/>
- https://cdn-images-1.medium.com/max/400/1*xyKBvrsqwldINAmXlw3KgA.png
- http://www.pharmaceuticalcommerce.com/index.php?pg=business_finance&articleid=26907&keyword=revenue-rebates-waste-management

Thank you

