

DevOps for Your Relational Database: *Foundations*

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About me



- Partner with MCW Technologies
- 17-year Microsoft MVP—Developer Technologies
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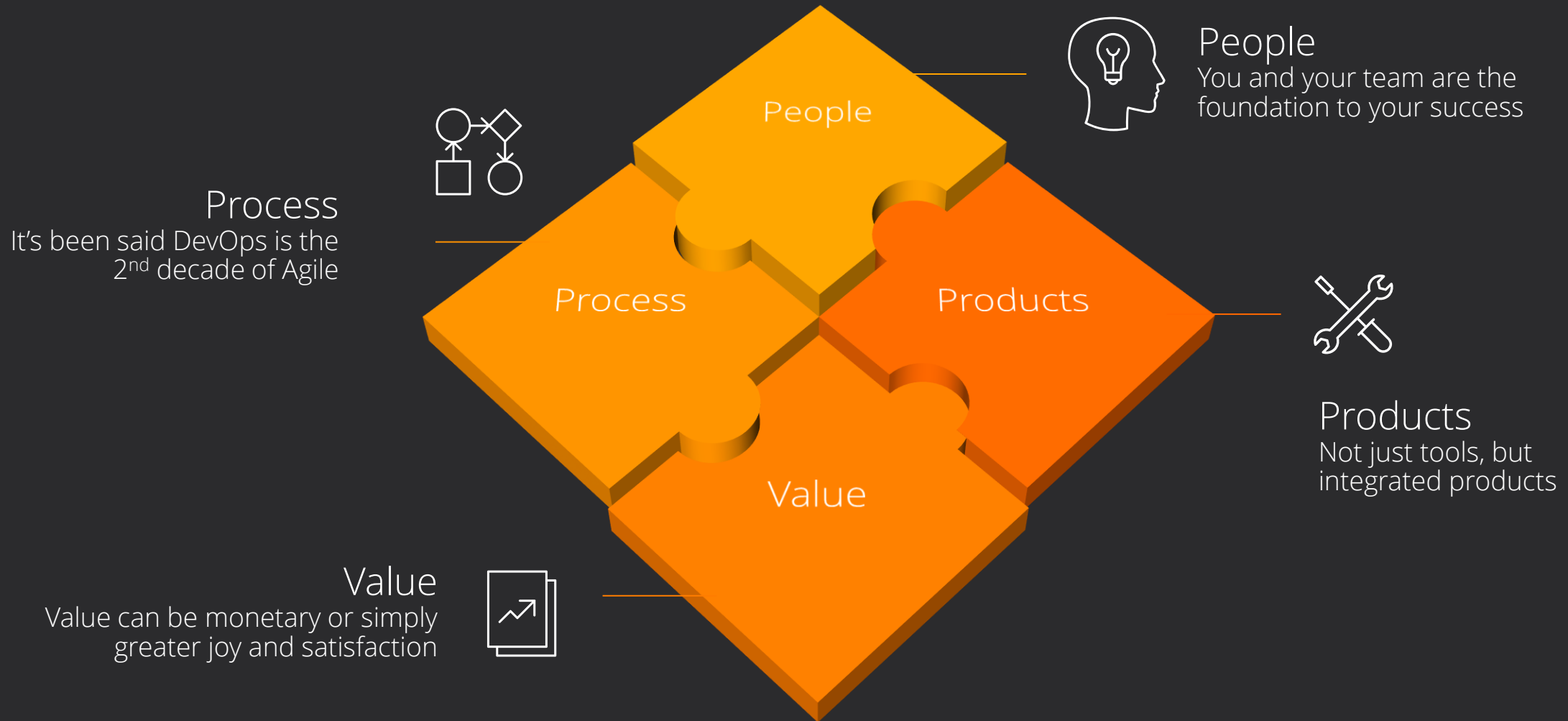
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presented by Brian A. Randell

What is DevOps?

DevOps is the union of **people**, **process**, and **products** to enable continuous delivery of **value** to your end users.



DevOps is a journey, not a destination

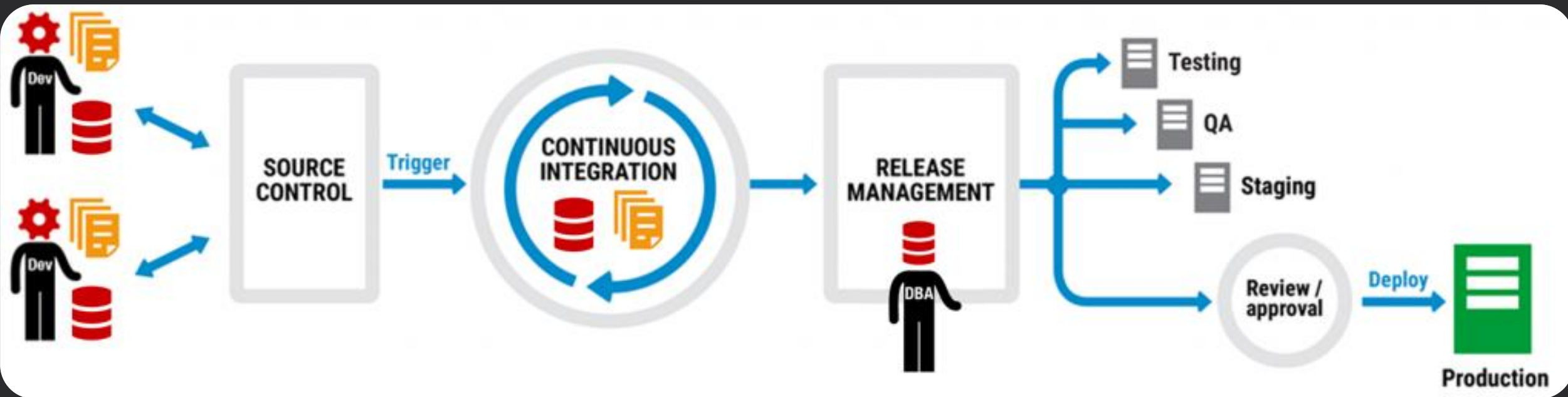


So we acknowledge that tools come last ...

... but ...

... a technological win can help start the journey.

An End-to-end Process



Great, but how?

- Let's look at an end-to-end CI/CD pipeline
 - Manage changes for a database
 - Deliver changes from developer -> shared dev -> test -> prod
- Tools I'm using
 - Microsoft SQL Server Data Tools inside Visual Studio 2019
 - Azure DevOps Pipelines
- Quite a Few Other Tools Available
 - Redgate
 - Octopus Deploy
 - GitHub
 - ... etc.

Models and Databases

- SSDT approach
- Take the “catalog” offline
 - Use a “state” model
- Model database entities as DDL entities
- Publish changes by comparing model to target
 - Changes packaged as DACPAC
 - Could use SQL scripts as well
- Expresses what your database should be

Migrations and Databases

- EF Core is an example of what this is
 - Define database via ORM
- Can also express via SQL “migration” files that are “played back”
- “Migrate” changes from model
- Expresses how your database should change

Some Considerations

- People and Process
 - Drift
 - Multiple apps using same database
- Updating the database and app together
- Data Motion
- Static Data Loading
- Compliant Test Data

Demo Time



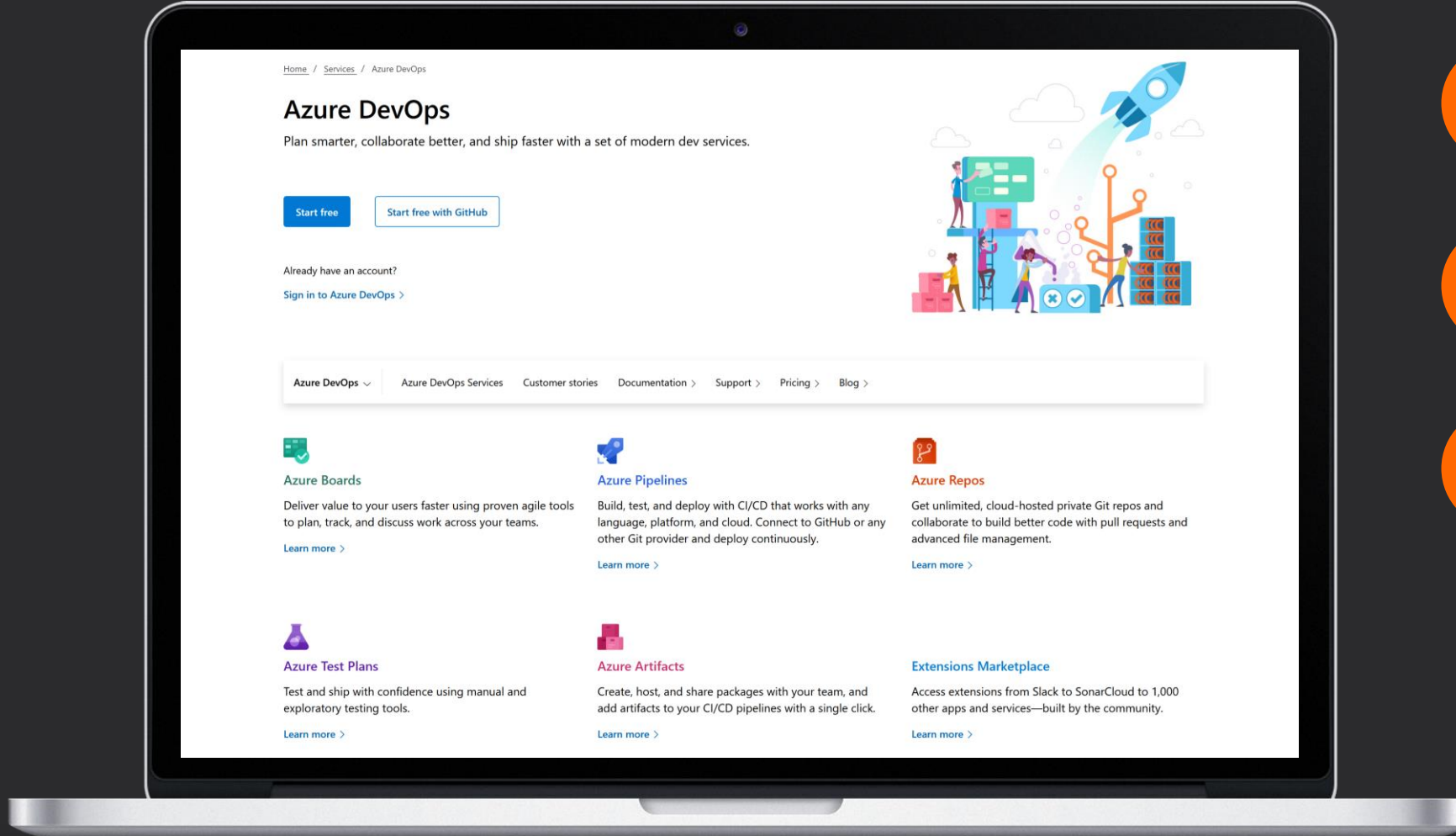
Inner Loop
SSDT and the Database



Repos
Protect your hard work and
play well with others



Automate
CI & CD #ftw



Thank You!

ευχαριστώ Salamat Po متشكراً شكراً Grazie
благодаря ありがとうございます Kiitos Teşekkürler 谢谢
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多謝晒 Ďakujem תודה நன்றி Děkuji 감사합니다

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Stay in touch!

