

+ Automated Testing

Achieving Success

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**The factors that differentiate winning capabilities
and a practical guide to implementing them**

+ Introduction – Nazar Hossain

A brief biography on today's speaker.

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Automation

- Led 30+ automated testing strategy, maturity assessment and development efforts
- Architected and implemented several Automated Testing Centres of Excellence
- Formed and led a 130+ person Automated Testing Centre of Excellence

Testing

- Designed and implemented several TCoEs across North America
- Risk-Based Testing, Automated Testing
- Testing Centres of Excellence, Testing Governance and Test Strategy
- Test Metrics, Planning & Estimation

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+ Background

Level-setting on automated testing.

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Background

Success Factors

Wrap-Up

+ Background

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Beyond labour arbitrage and process optimization, there aren't many other ways to reduce testing costs.

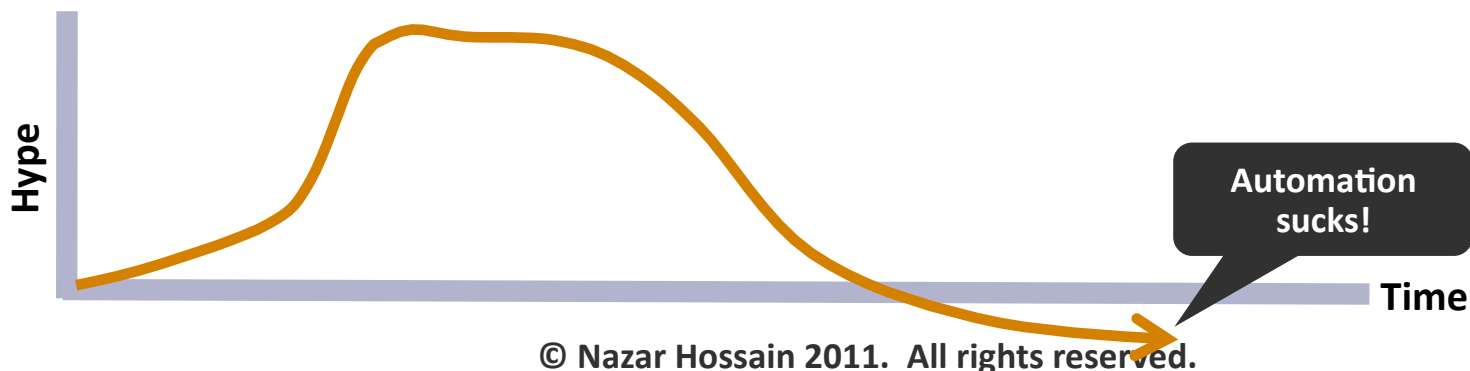
Definition

- Using software and / or code to test other software and / or code

Key Benefits

- Time – e.g. reduce test execution cycle time by 40 – 80%
- Cost – e.g. reduce overall testing costs by 20 – 50%
- Quality – e.g. improve overall application quality

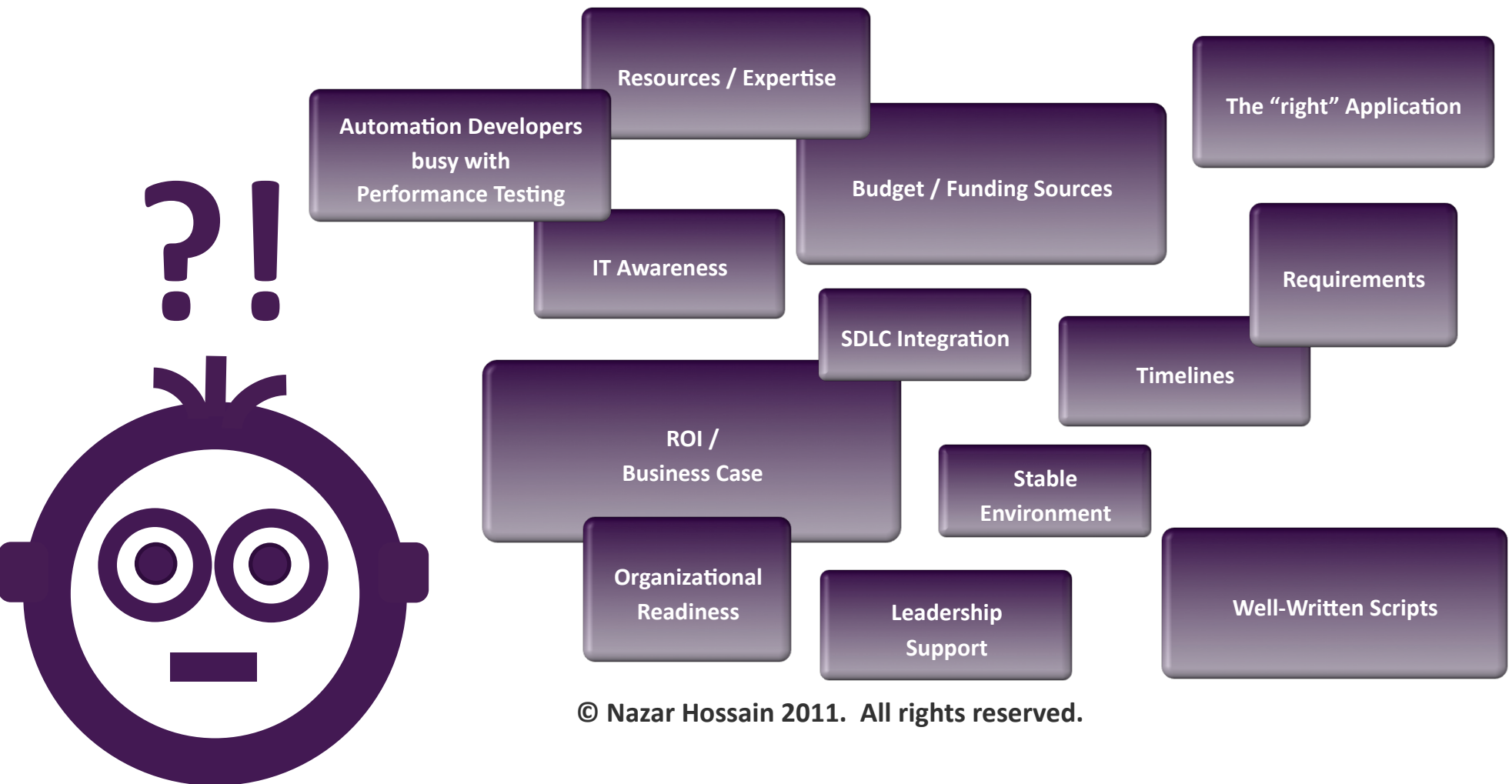
The Hype Curve



+ Background

Automation is unique in QA – it has a wide reach across IT but also a limited set of assets to address challenges.

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+ Success Factor # 1

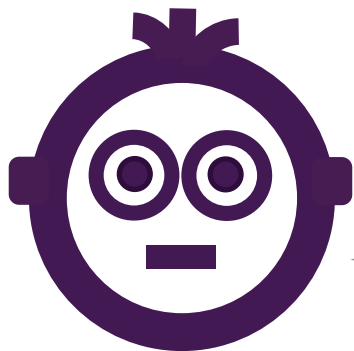
Have a consistent, end-to-end process to manage & measure the success of automation opportunities.

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Background

Success Factor # 1

Wrap-Up

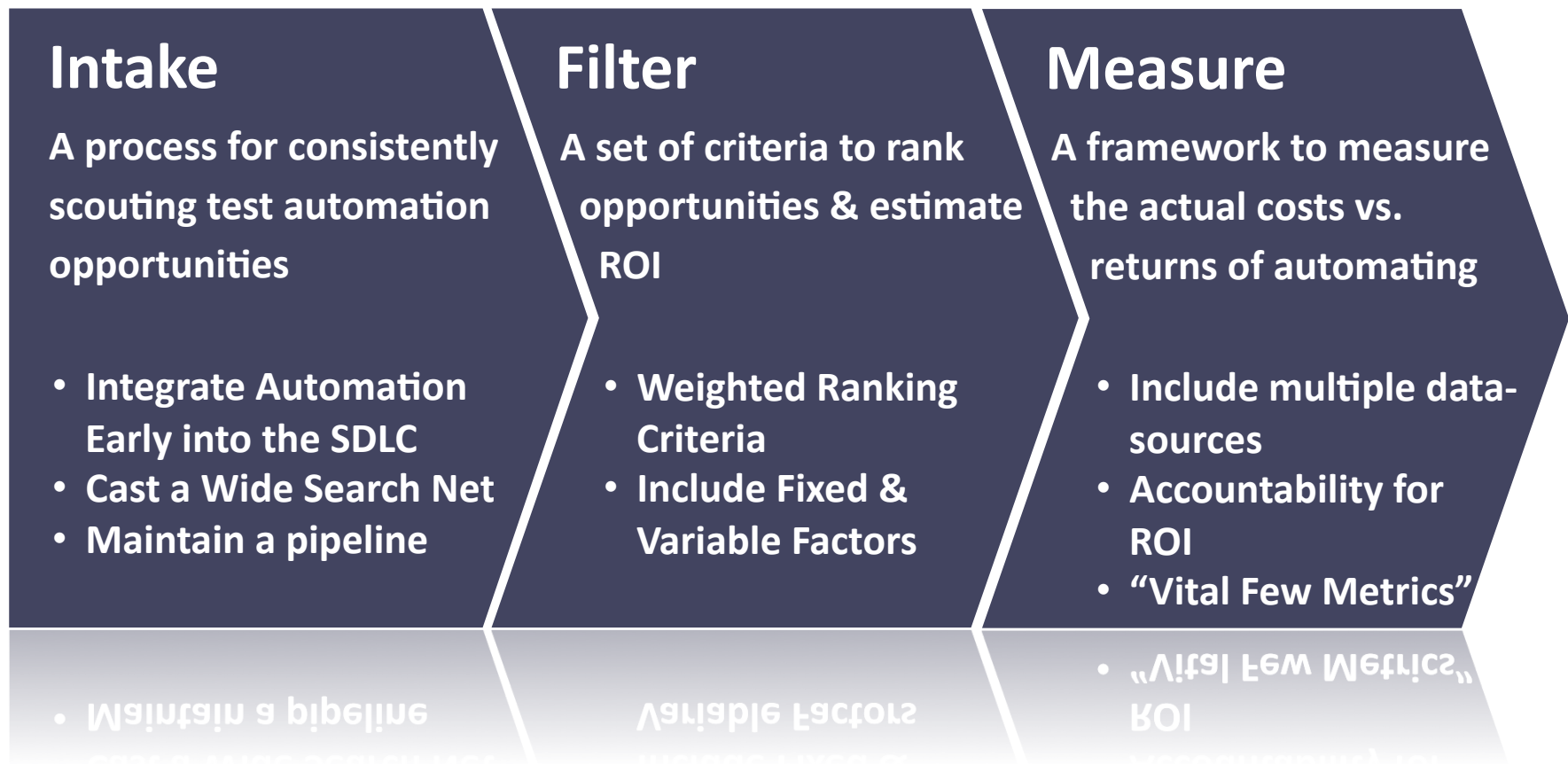


We automated the scripts
because they were executed a lot

+ Success Factor # 1

Have a consistent, end-to-end process to manage & measure the success of automation opportunities.

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+ Success Factor # 1 - Exercise

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What factors are relevant when estimating costs vs. savings?

Which of the following are factors that should be included when estimating the costs vs. savings of automating (think traditional functional GUI automation)?

- Rate of change of the application servers pre-deployment
- Rate of change of the application business logic post-deployment
- Execution savings from executing scripts which normally wouldn't be executed
- Estimated test environment downtime
- Availability of test data
- Technical compatibility between application interface and automation tool
- Production data on common user flows for the application(s)
- # of application integration points



+ **Success Factor # 2**

Make automation part of the critical path.

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Background

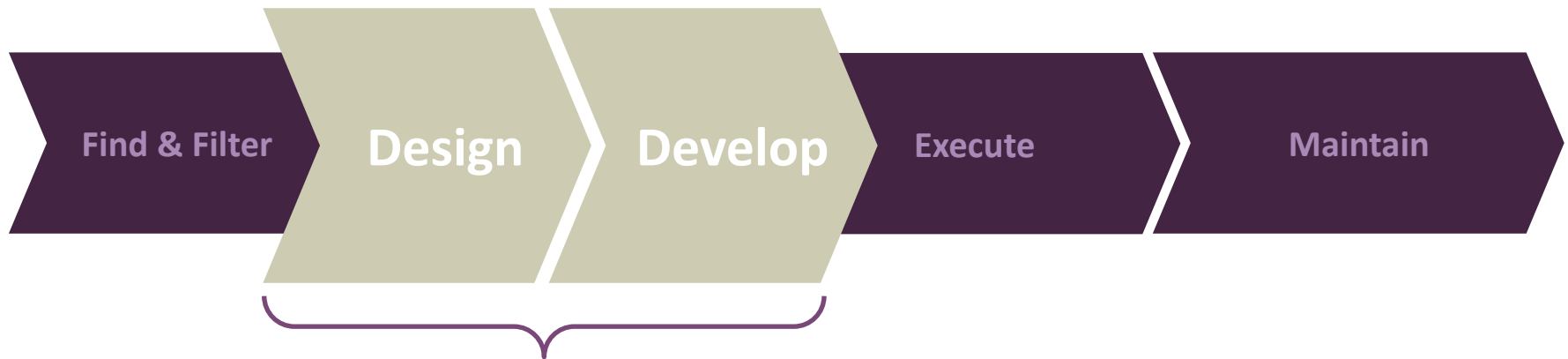
Success Factor # 2

Wrap-Up

+ Success Factor # 2

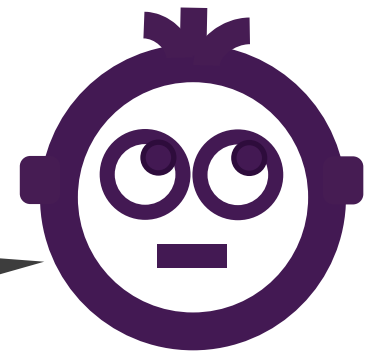
Make automation part of the critical path.

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- The automation tool
- Technically impressive architecture and framework
- Well-documented development standards

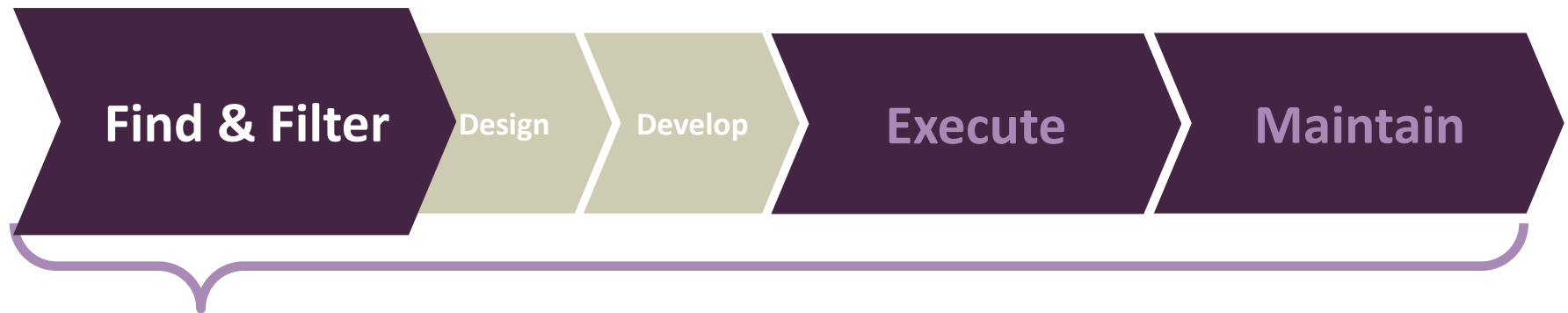
If an automation developer makes a sound, does anybody hear?



+ Success Factor # 2

Make automation part of the critical path.

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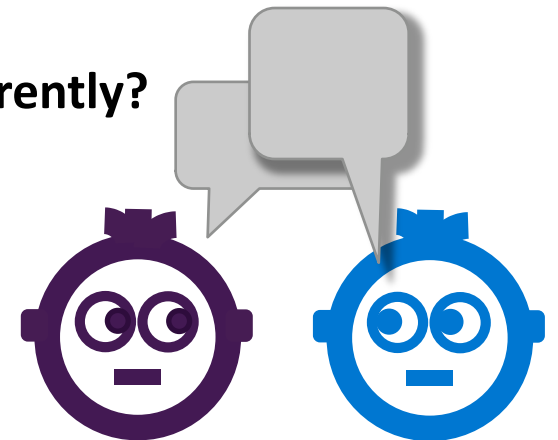
- The typical QA organization has less than 5% of testing automated*
- Project planning / test planning should include a portion on automation
- Standardized funding sources & process (e.g. maintenance vs. projects)
- Demonstrate why automation should *not* be used
- The right assets, like automation ROI estimators, etc, need to be available

+ Success Factor # 2 - Discussion

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Do you have any experience with obtaining funding for an automation initiative?

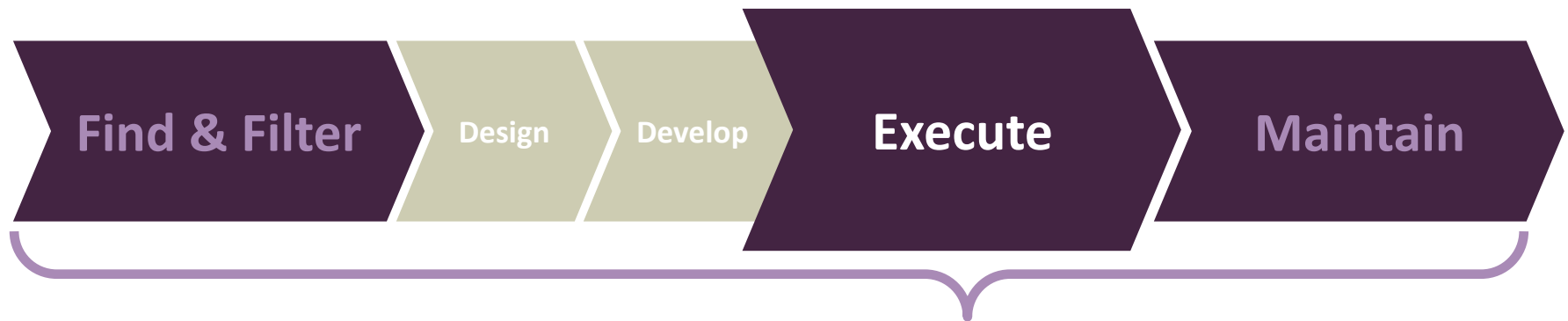
- What was the source of the funding? A project? Special initiative? Maintenance?
- Did you encounter any challenges in getting funding?
- What did you need to include in your request? Costs? Savings? Cost Avoidance? Internal Rate of Return?
- What did people want to know before approving?
- How would you like to see your organization work differently?



+ Success Factor # 2

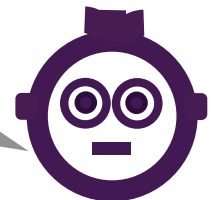
Make automation part of the critical path.

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- Under pressure, the majority of testers will still execute tests manually
- Redefine roles and processes to blur line b/t automated & manual testing
- Leverage next wave of integrated QA management & automation tools
- Reliability and trust in the automated scripts are key

To run the automated script, you first need to open the jar file in your root directory, then enter in all your data using this custom template, then contact the environment guys to reset the environment, then put all the files into a folder and compile them, then...



+ Success Factor # 2

Make automation part of the critical path.

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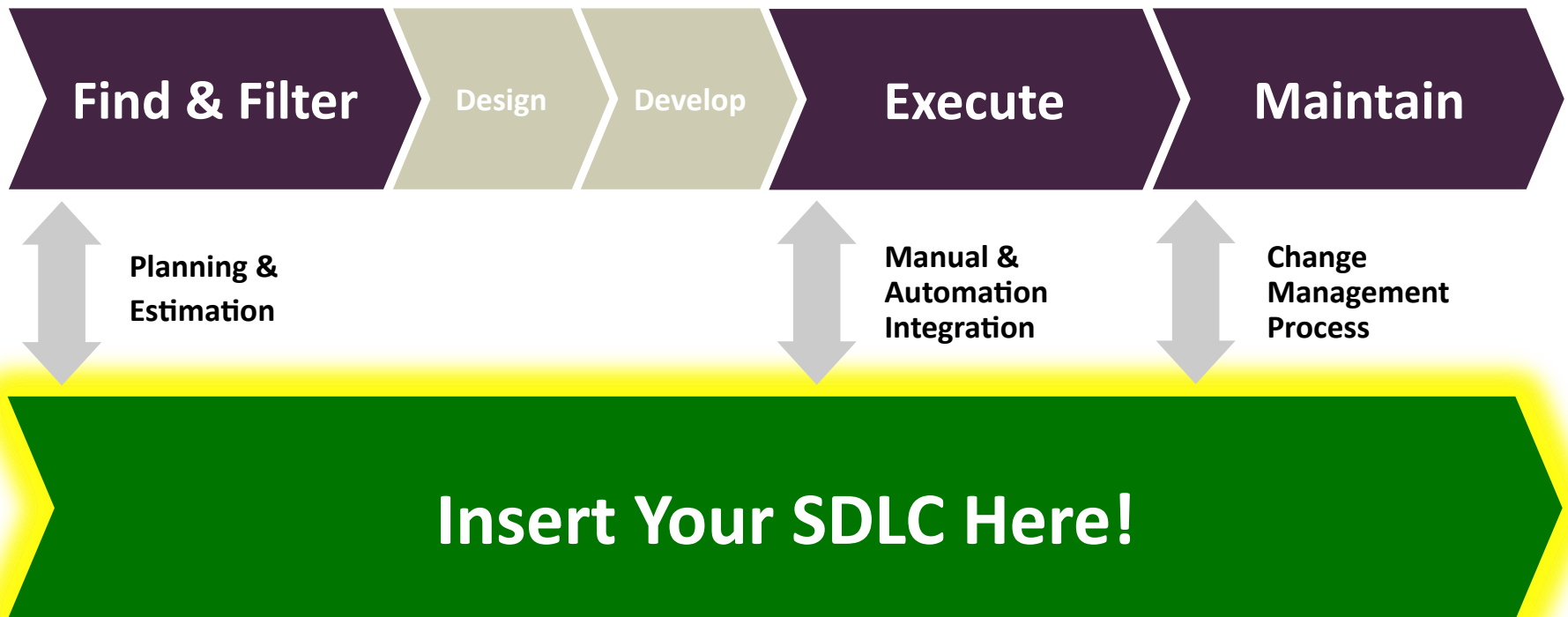


- **“We weren’t aware that the application had changed!”**
- **Update change management processes to include automation**
- **Use a standardized list of change triggers**
- **Budget for maintenance and include as part of your ROI**

+ Success Factor # 2

Make automation part of the critical path.

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+ Success Factor # 2 - Exercise

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Which of the following opportunities are good candidates for automation?

Smoke Test /
Shake-Out

New Application
Being Developed via
Agile

Business Rules
Validation Testing

GUI Validations (e.g.
alignment, colours,
graphics, etc)

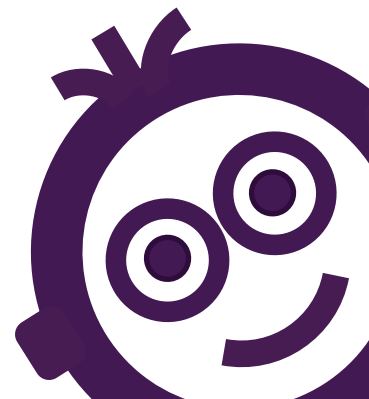
Application
Regression Test (Data
Centre Migration)

End to end device
testing

Data Management &
Data Creation

Web-App Testing
(using the latest
version of Silverlight)

Mainframe



+ **Success Factor # 3**

Focus on People.

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Background

Success Factor # 3

Wrap-Up

+ Success Factor # 3

Focus on People.

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Roles & Responsibilities

- Enterprise-wide R&Rs
- Leverage RACI Matrix
- Train the Enterprise (formal & informal training)

Career & Performance Mgmt

- Have an automation career path
- R&Rs + Metrics = **Performance Management**

Governance

- Community of Practice vs. Centre of Excellence vs. Shared Service
- Service Providers vs. In-House Delivery

+ **Thank You!**

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