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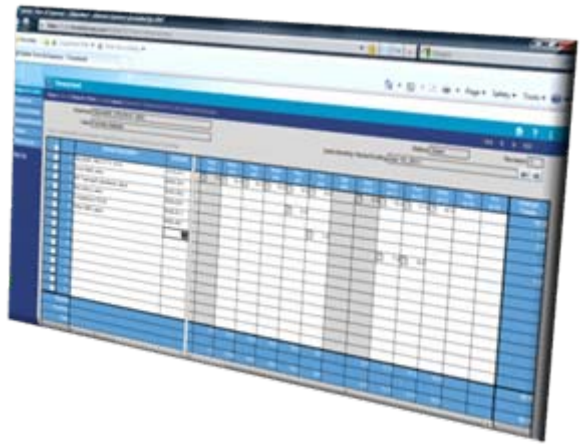
Dynamic Help Desk Modeling

SCEA Conference 2011- Albuquerque, NM

Background / Introduction

- Objective – Accurately estimate the long-term annual helpdesk cost for a major DoD ERP System
  - 65,000+ Users
  - Financial Management, Acquisition, Contracts, Personnel Mgmt., Supply Chain Mgmt. functionality
  - Rolling wave deployment strategy over 6 years
  - SAP software
  - Cost projections for 20+ year period



Three Tiered Help-Desk Structure

Tier 1

- Initial Triage – Answer Simple How to Questions
- Escalates other Issues to Tier 2/3
- 24/7; low skill level, low cost

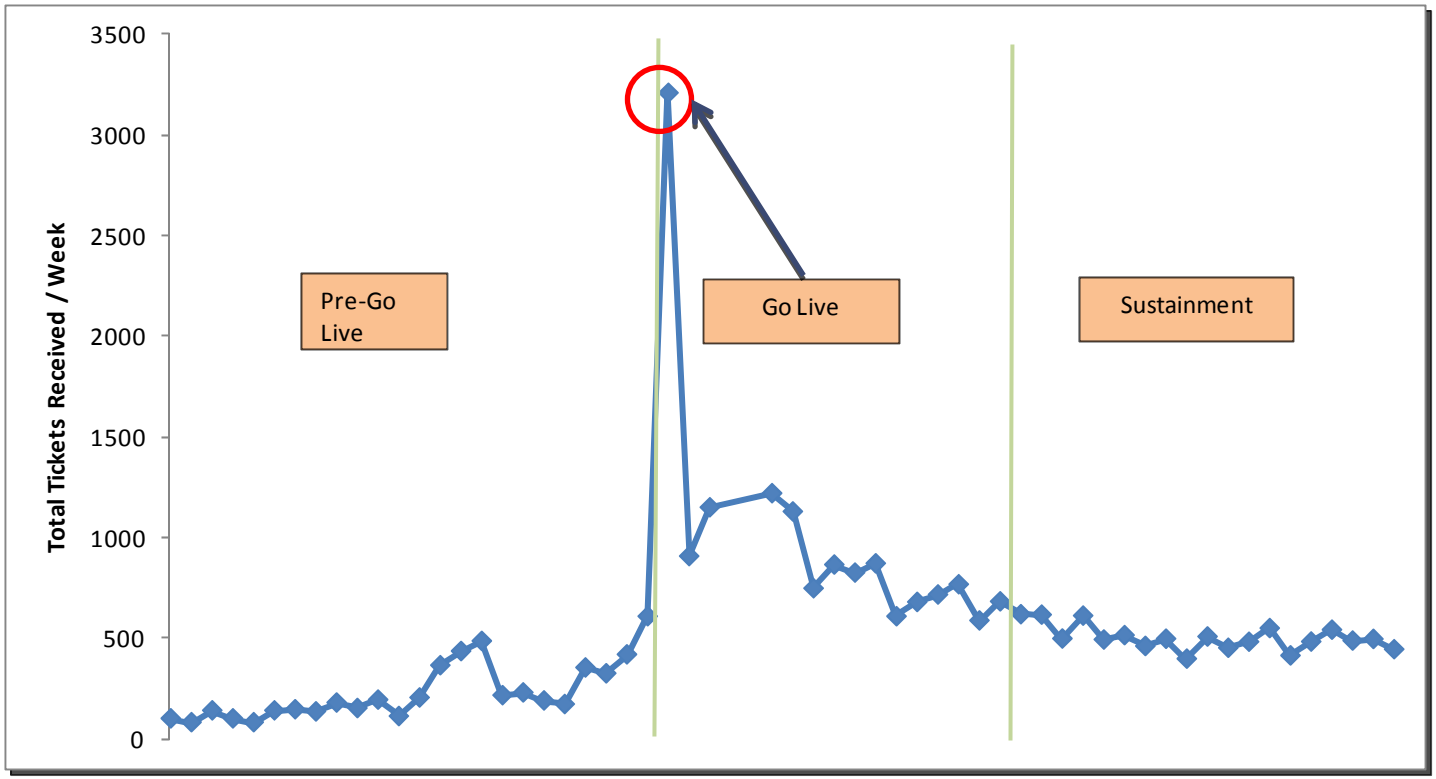
Tier 2

- "How to", Business Process, Technical Issues (Server reset, outages)
- Further Triage
- Mon-Fri : 8:00 A.M – 6:00 PM; medium skill level, medium cost

Tier 3

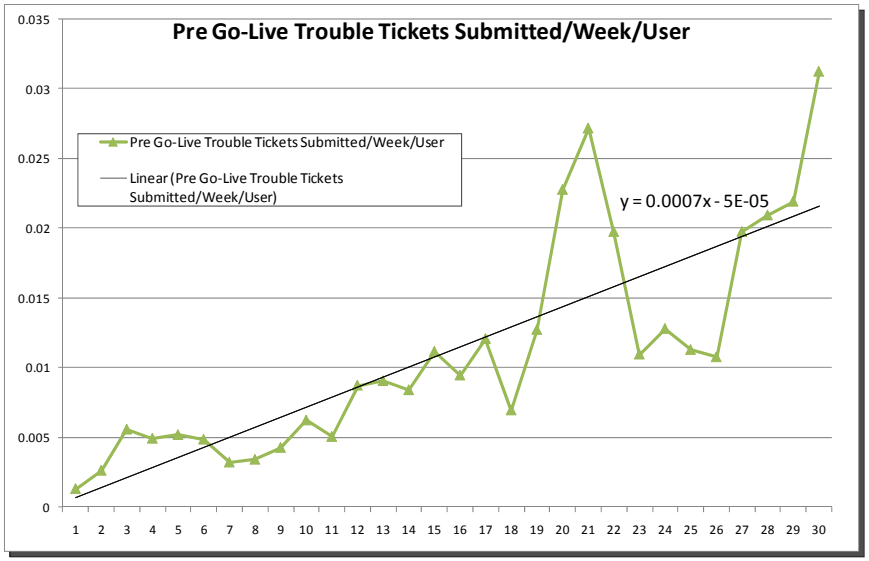
- Technical/Basis Support and Functional Support
- Resolve complex system defects
- Mon-Fri : 8:00 A.M – 6:00 PM; high skill level, high cost

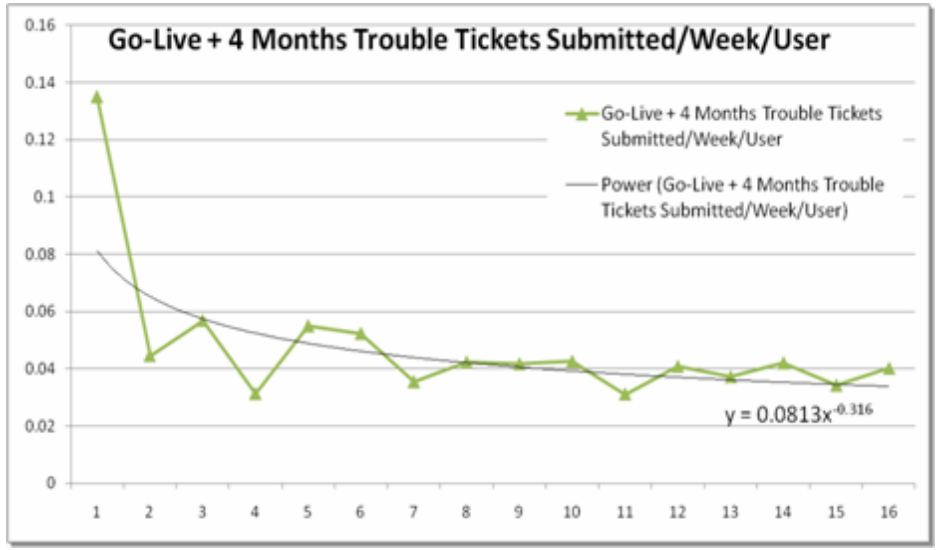
Data from First of six Deployments



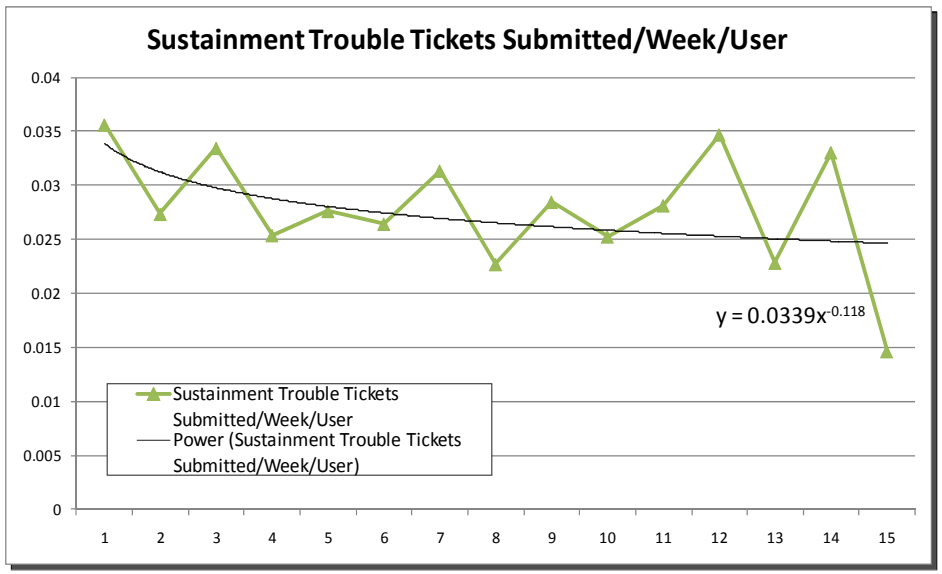
- Data from the first go-live indicated three distinct periods of helpdesk support requirements
  - Pre-Go live – low ticket volume, slowly increasing over time
  - Go Live – high ticket volume, sharply decreasing after Go Live
  - Sustainment – medium ticket volume, slowly decreasing over time

Data from First of six Deployments





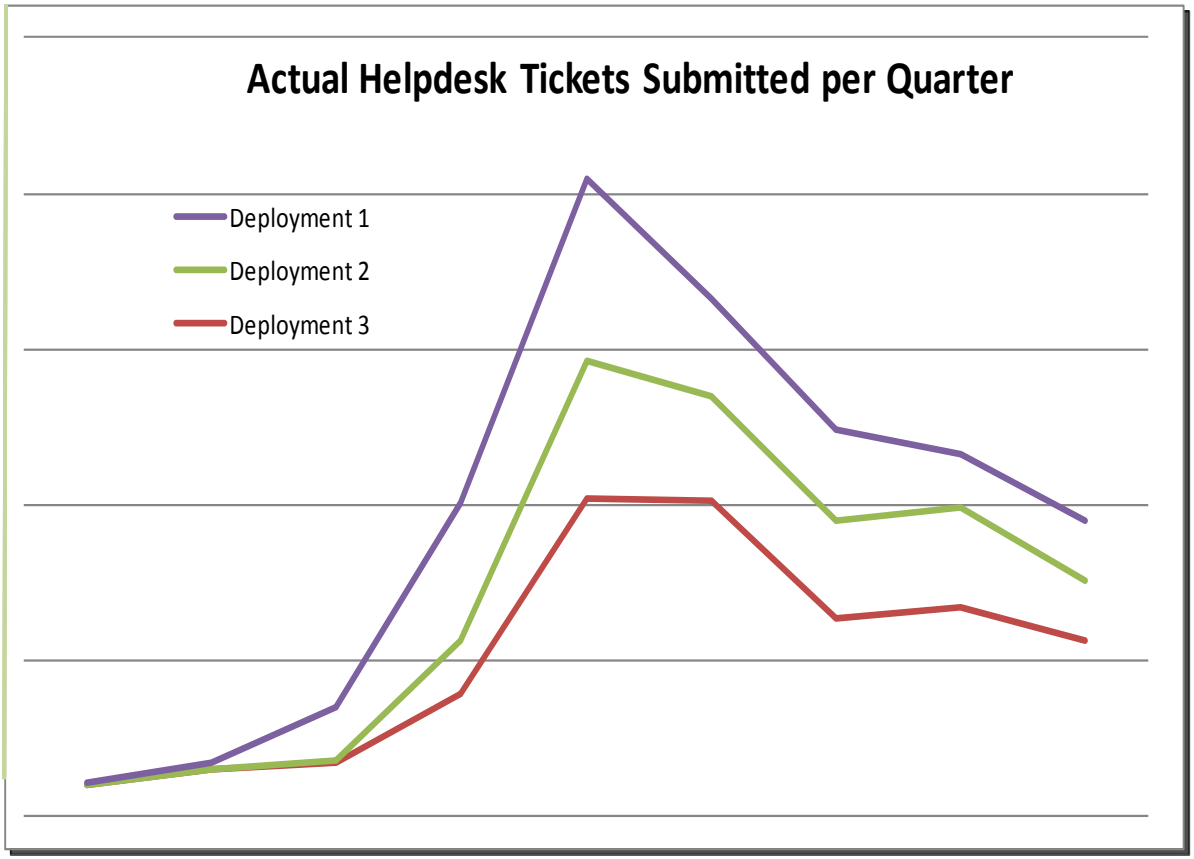
- Regression equations were developed for the 3 distinct periods around Go-live
- Equations predict number of tickets submitted / user / week based on deployment phase and week



Key Variables and Cost Drivers

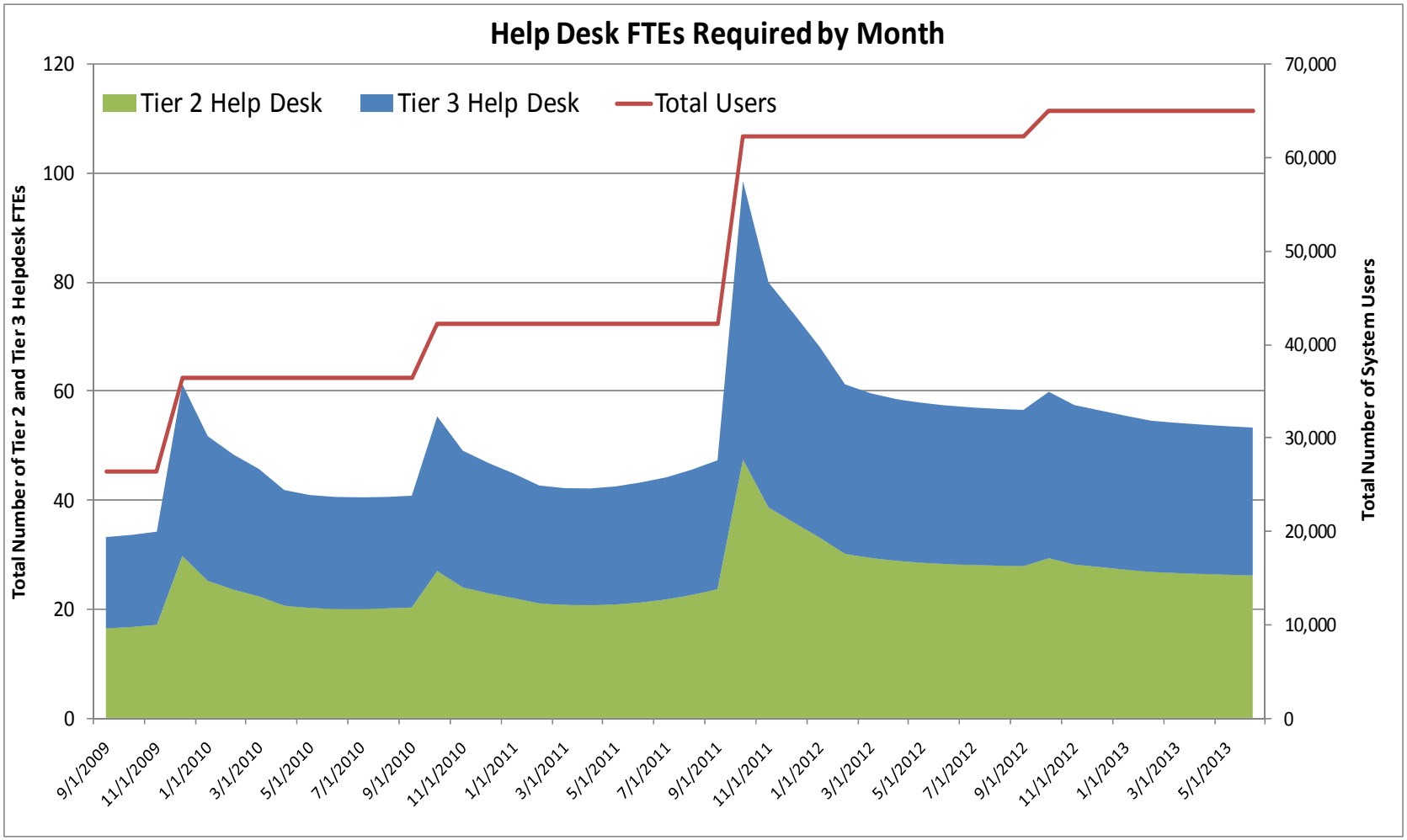
Variable	Impact on Help Desk Staffing Requirements	How the Model addresses this
Total Users & Active Users	More users = more tickets; active users is a better predictor of volumes than total users	Regression equation normalized based on user counts; predicts per user ticket volume
User Maturity	Gradual decrease in tickets over time	Regression equation for sustainment has a negative slope
System Maturity	Volume of tickets / active user decreases w/ each deployment	System maturity factor is used to calibrate the model
Service Rate Improvements	Tickets are closed faster as helpdesk resources gain experience	Service rate improvement factor is used to adjust service rates over time
New functionality and system upgrades	Spike in helpdesk calls around the implementation of new functionality	Deployment dates and affected # of users can be quickly added on the import form

System / User Maturity



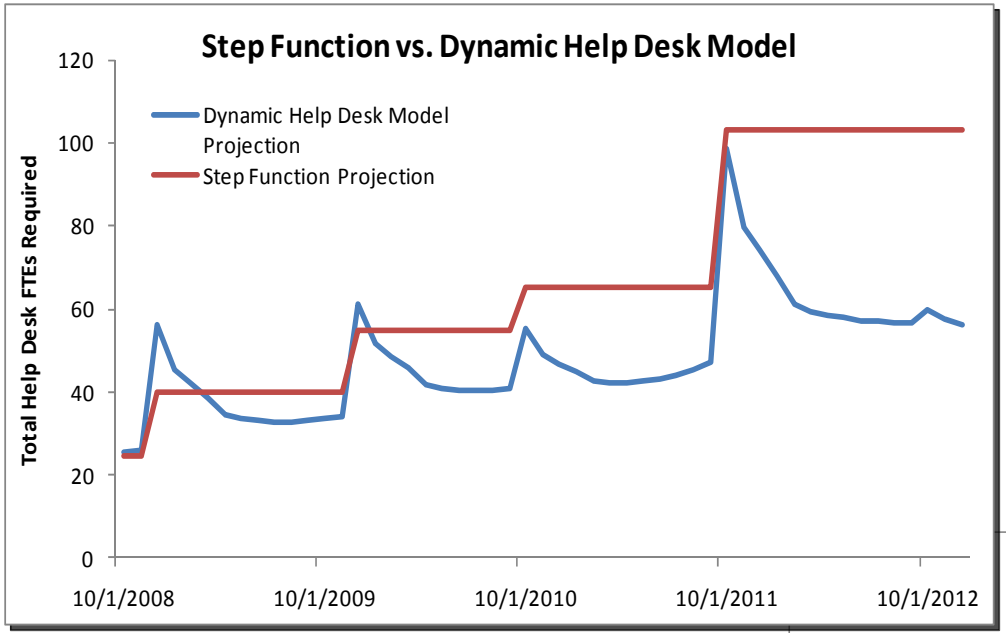
- System maturity reflected by decrease in ticket volume / user for each deployment
- User maturity demonstrated by decrease in tickets over time

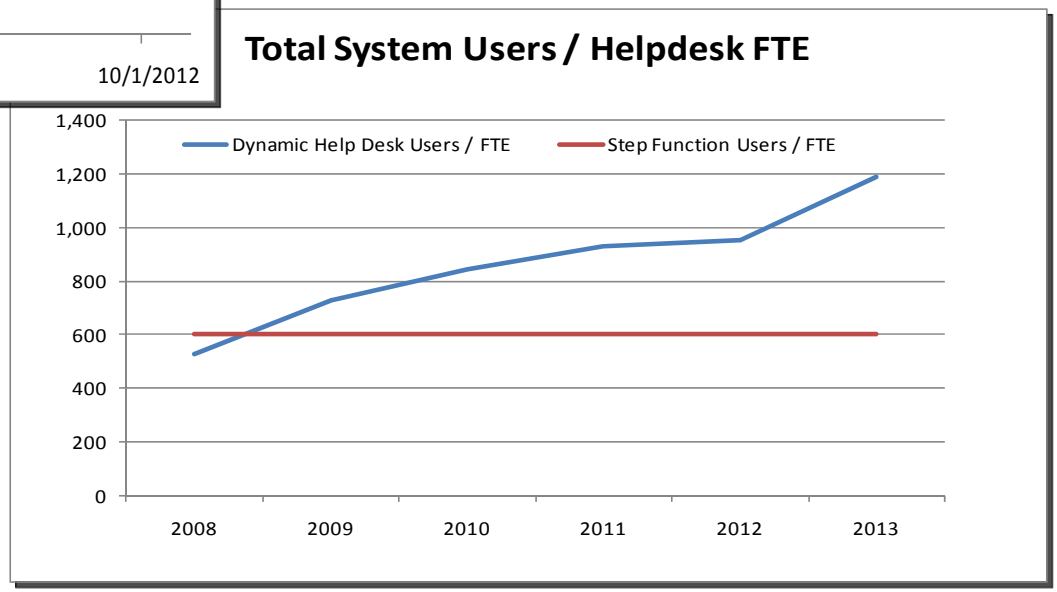
Model Output



- Once calibrated, the model projected the # of tickets to within 5% of actuals

Comparison to Step Function Methodology





Benefits of the Model

- Dynamic model output significantly more accurate than step function / SME estimates
- Enabled accurate long-term staffing forecasts
- Identified significant future funding shortfalls
- Provided DoD leadership with confidence in cost forecasts; key enabler for significant funding increases
- Rapid what-if scenario modeling to support programmatic decisions, cost forecasts, and budgeting
- Enabled the program to recoup costs associated with added users
- Provided an objective tool to validate subjective SME inputs

Q&A