

TALKING TO THE CFO

Aligning with business executives on **technology investment and digital transformation**

NXTWORK2017
JUNIPER CUSTOMER SUMMIT

JUNIPER
NETWORKS

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DEFINITION OF DIGITAL TRANSFORMATION

The definition of digital transformation is the realignment of, or new **investment** in, **technology, business models,** and **processes** to drive **new value** for customers and employees and more effectively compete in an **ever-changing digital economy.**

Brian Solis

Senior Analyst, Prophet



DIGITAL TRANSFORMATION

EXECUTING
ON IDEAS
THAT
CHANGE
BUSINESS

HOW TO TALK TO THE CFO



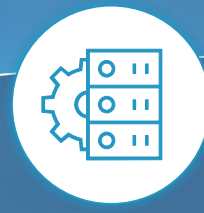
ALIGNING FOR GROWTH

How **digital transformation** impacts your business and why



UNDERSTANDING THE BUSINESS OUTCOME

Connecting the **business and technology conversation** for the CFO



QUANTIFYING VIRTUALIZATION AND AUTOMATION

Intro to **financial frameworks** for evaluating risk and reward



GETTING STARTED

Apply the **Juniper Digital Transformation Checklist**

HOW TO TALK TO THE CFO



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Idea: build the world's most
technology advanced locomotive

.....

IoT-based sensors
leveraging GE Predix

.....

Significant operational
savings, increased safety and
reduced emissions

GE
TRANSPORTATION

The background features a blurred image of several baskets filled with fresh fruit, including red apples and yellow lemons. Overlaid on this image are three white location pin icons. A network of thin, light blue lines connects various points across the right side of the image, creating a digital or data network aesthetic.

WALMART

OFFLINE AND ONLINE INTEGRATED EXPERIENCE

Idea: ecommerce innovation **inside** the worlds largest retailer

: Big data analysis for
: deeper understanding
: of **customer behaviors**
: **and segments**

: Integration of **online**
: **and offline commerce**
: for differentiated
: customer experience



GOLDEN STATE WARRIORS



Idea: leverage technology to stay closer to fan base

.....
Mobile app using **beacon technology** for specific messages and offers

.....
Increased ticket and **merchandise sales**

MATTERPORT

Idea: scale the
potential buyer
viewing experience
.....

Enabled by **3-D**
composite
animations
.....

Global impact,
higher revenues



WAYMO

Idea: revolutionize transportation with self-driving cars

.....

Sensors that detect and identify objects, people and motion up to 200 yards with **AI based responses**

.....

10x safer than safest human demographic class and **40x** safer than new drivers



THE PLATFORM ECONOMY

Supply side economics •

Traditional value chain business model

To

• Demand side economics

Platform-driven business model



Producers Distribution Marketing Consumers

- **Customer** value
- **Internal** optimization
- Resource **control**



Providers owners **Network** Producers consumers

- **Ecosystem** value
- **External** optimization
- Resource **orchestration**

PLATFORM-BASED BUSINESS MODELS

Bring together producers and consumers in high-value exchanges to drive growth

ADVERTISING

B2C

Google



CLOUD

IT and Applications



INDUSTRIAL

IoT and Industry 4.0



SIEMENS

PRODUCT

B2C and B2B



Spotify



LEAN

B2C

UBER



\$10 TRILLION in Value from Digitization in Next Decade



E-COMMERCE

\$3.1T



AUTOMOTIVE

\$2.6T



LOGISTICS

\$2.1T



ELECTRICITY

\$1.5T



MEDIA AND
ENTERTAINMENT

\$.7T

**BUSINESS MODEL
DISRUPTION**



**PROCESS
DISRUPTION**



TECHNOLOGY ENABLES BREAKTHROUGHS

.....

Resource orchestration | Telemetry | Service orchestration | Blockchain | Big data
Analytics | Microservice | Containers | Edge computing | 5G | Virtualization
Automation | Everything as a service | Service chains | Open source

HOW TO TALK TO THE CFO



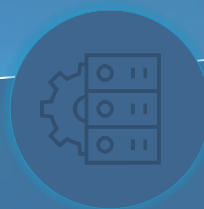
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THE MODERN CFO IS THINKING MORE BROADLY

Improve
**operational
efficiency**

Help define the
strategic direction

CFO

Select **growth
investments**

Minimize risk

WHICH IS WHY TRADITIONAL BUSINESS MODELS DON'T WORK



ROI

NPV and **IRR** are based on **static and future cash flow and discount rates**

Does **not show impact** on financial measures



TCO

TCO models are generally **asset based models**

Benefits often **not based on underlying strategic or structural changes**

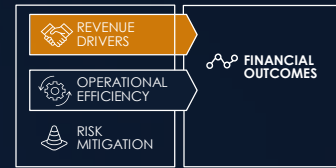
DISCUSSION NEEDS TO
BE **SPECIFIC TO DESIRED BUSINESS OUTCOME**

WHAT DOES WORK?

Linking investment recommendations
to strategic and financial outcomes



MAKING THE CONNECTION: REVENUE DRIVERS



Outcomes

- Deliver **new product** offerings
- Enter **new markets**
- Improve **customer experience**
- Engage new **business models**



The conversation

- Customer data collection and analytics to **identify trends**
- **Ecosystem** based platform for new capabilities and high-value interactions
- **Marginal cost** of entry and **business risk**



Capabilities

- In-depth analytics engine to understand **customer behavior**
- **Open**, multi-vendor service creation platform & catalog
- Service chaining to drive **revenue generating**, platform-centric offerings
- Community driven **innovation** with open source software

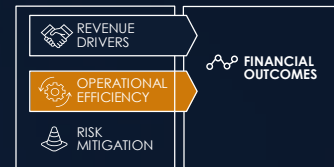


Juniper solution

CONTRAIL CLOUD

- **Contrail** networking
- Red Hat **OpenStack**
- **Service Creation Platform**

MAKING THE CONNECTION: OPERATIONAL EFFICIENCY



Outcomes

- Reduced **cycle times**
- **Faster time** to market
- Increase asset leverage
- **Reduced** equipment downtime



The conversation

- **Process data** and telemetry information collection support
- **Business process** reengineering & value chain analysis to reduce process times
- Automated **policy enforcement** and **compliance**



Capabilities

- **Intent-Driven** Infrastructure, powered by **artificial intelligence**
- Real time reporting and **predictive** capacity planning
- Advanced, **real time telemetry** data
- Intelligent interface to manage traffic and **maximize network utilization**
- **End-to-end automation** of configuration, testing, deployment and operations



Juniper solution

APPFORMIX

- **Application** management & **hybrid cloud** monitoring

NORTHSTAR

- **WAN SDN** Controller

JUNOS AUTOMATION

- **DevOps** Tools, Junos Event Driven Infrastructure, and **Open APIs**

MAKING THE CONNECTION: RISK MITIGATION



Outcomes

-  **Business** risk
-  **Compliance** risk
-  **Cybersecurity** risk



The conversation

- Variable versus fixed **cost structures**
- **Industry solutions** for compliance
- Automated assessment, dedection and **policy enforcement**



Capabilities

- **Variable** and **usage**-based pricing models
- Open source for transparency, interoperability, and **future-proofing**
- Consistent **Intent-Driven** Security Policy
- Open, **multivendor** security ecosystem
- Dynamic, **automated** threat remediation



Juniper solution

CONTRAIL SECURITY

- Automate **policy** across **multi-cloud** environments

SKYATP

- Cloud-based threat prevention

CYPHORT

- Open analytics platform for incident and response mgmt

SRX/vSRX/cSRX

- Next-Gen FW, Virtualized FW and Container FW

HOW TO TALK TO THE CFO



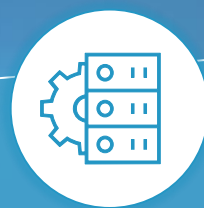
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THE CONVERSATION IS ABOUT RISK AND REWARD

MANAGEMENT CONCEPT

TECHNOLOGY INFLUENCE

BUSINESS IMPACTS



OPERATING LEVERAGE

Degree of **fixed** versus **variable cost**

- SDN/NFV and utility models **create** a variable-based cost infrastructure

- **Marginal Cost** of entry, **business risk**, and **maximum profitability**



ACTIVITY-BASED COST MODELS

Evaluation of **process costs** and **value add**

- **Automation, Machine Learning** and **AI** leveraged to reduce **process cycle times**

- **OPEX, quality** and **knowledge worker migration**



REAL OPTIONS

Future choices **made available** from investments

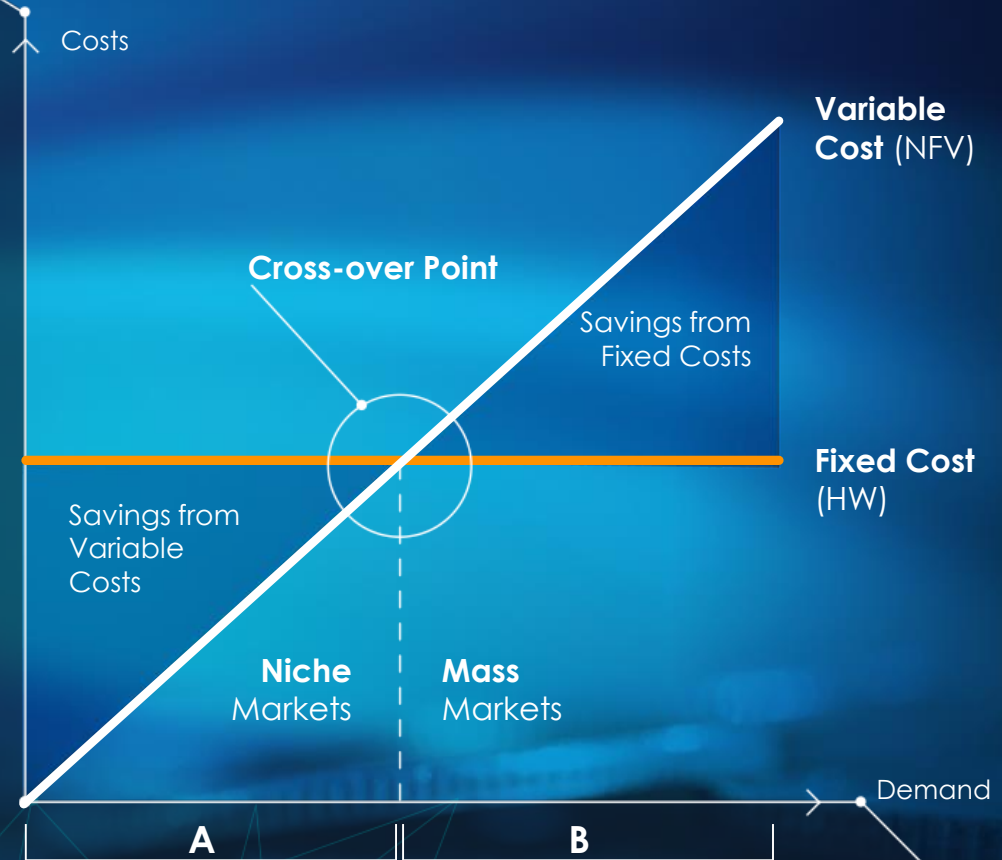
- Provide the ability to quickly **increase, decrease or hold investments** based on results

- **Decision making, optimization** of investment, and aligns to **agile/DevOps** environments

OPERATING LEVERAGE

Maximize Profitability

- **Choose** the degree of **operating leverage** (DOL) to maximize **profitability**
- Factors to consider:
 - Market size and composition
 - Certainty of demand forecast
 - Diurnal or season cycles



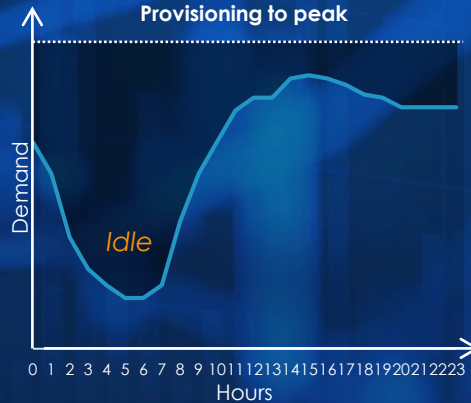
USE CASES FOR VARIABLE COST INFRASTRUCTURES



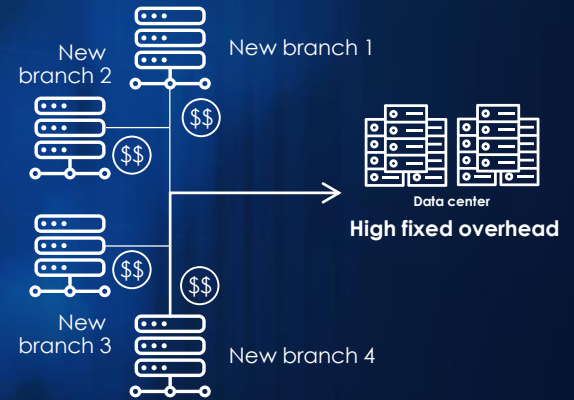
EXPANDING MARKETS OR OFFERING NEW SERVICES



SEASONAL OR BUSINESS CYCLE PEAKS



REMOTE LOCATIONS AND DATA CENTERS





DevOps

- **Software engineering** and lifecycle approach to developing and deploying new services and applications
- **Goal: Faster time to market, increase release cycles and lower failure rates**

OPERATIONAL EFFICIENCY

Minimizing OPEX



BUSINESS PROCESS REENGINEERING (BPR)

- Analysis and design of **workflows** and **business process**.
- Goal: Fundamentally rethink the business to **improve customer service** and lower OPEX



PROCESS VALUE ANALYSIS

- Examination of which business process activities provide **the most value**
- Goal: Streamline activity without sacrificing quality

TIME-DRIVEN ACTIVITY-BASED COST MODELLING

$$\text{Activity costs} = \# \text{ of events} * \sum_{i=1}^N (\text{sub-process execution time}_i * \text{resource cost}_i)$$



Eliminate or reduce
the number of
activity events



Reduce N - the
number of **sub-processes**
within an event



Reduce the time of
each of the remaining
sub-processes



Shift the cost to
a **less expensive**
resource

SEQUENCING AND OPTIONS

LIMIT RISK AND INCREASE BENEFITS



TIMING

Initiate, defer or abandon

Sequenced or parallel execution



SCALE

Out: built with excess capacity or extensible structures

In: engineered such that it can be downsized



SCOPE

Product **flexibility** to **add or delete features**

Partnerships and ecosystems

REAL OPTIONS VALUE EXAMPLE



Initial investment
based on cash
flow analysis

Initial scalable app

- Investment option
- Business results

High volume response



SCALE

Option 1:
Loyalty program

Seat
upgrades

Food/
beverage

Store
merchandise

Parking
voucher sales

Valet sales

Lots of suburban users



SCOPE

Option 2:
Parking
Validation

Few
downloads, low
volume usage



TIMING

Option 3:
No dev

No change



Options limit
risk and
increase
potential
business
impact and
profitability

A FINANCIAL MODEL FORECASTS FINANCIAL OUTCOMES



1. Develop Revenue and Expense Forecast

- Forecast services revenue
- Activity-based expense allocation to services



2. Create pro forma financial statements

- Income statement
- Balance sheet
- Statement of cash flows



3. Deliver financial outcomes



Gross margins and operating profit



Capital requirements and change in assets



Impact on cash flow and cash position

HOW TO TALK TO THE CFO



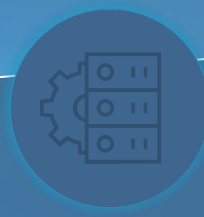
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OUR POINT OF VIEW



DIGITAL TRANSFORMATION IS A DRIVER OF MODERN BUSINESS STRATEGY



Financial models provide you a common language for demonstrating how **technology investments** can impact financial outcomes



When presenting **investment options to a CFO**, focus on operational metrics and strategic outcomes

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NETWORKS

JUNIPER DIGITAL TRANSFORMATION CHECKLIST V2.0



DEFINE CONCRETE BUSINESS OUTCOMES AND VALUE

- Align to business model and identify impacts on existing business process
- Set revenue and cost driver outcome targets that influence profitable growth



FORMULATE THE COMPONENTS OF THE FINANCIAL MODEL

- Develop both revenue and costs models to create pro-forma statements to assess investments and impacts



IDENTIFY THE EXECUTIVE SPONSOR AND SECURE SUPPORT AND COMMITMENT

- Must work with peers in support of a collective response to digital challenges
- Must understand the impact of digital transformation on all aspects of the business



PICK LIGHTHOUSE PROJECTS AND SEQUENCE FOR QUICK RETURN

- Look for higher reward lower risk projects to start with to gain early wins
- Treat suppliers and partners as you do your customers, and start to build your ecosystem



BUILD A GOVERNANCE FRAMEWORK

- Effectively manages and mitigates risk AND
- Embraces and encourages innovation



TRANSFORM OPERATING MODEL AND BUILD SKILL SETS

- Organize around sources of value creation and less around organizational silos
- People skills have to be keep up with systems capabilities

WHY PARTNER WITH JUNIPER NETWORKS



INFLUENCER
in every aspect
of the IP network



BUILDER
of platforms
and services



LEADER
in networking and
cloud innovation

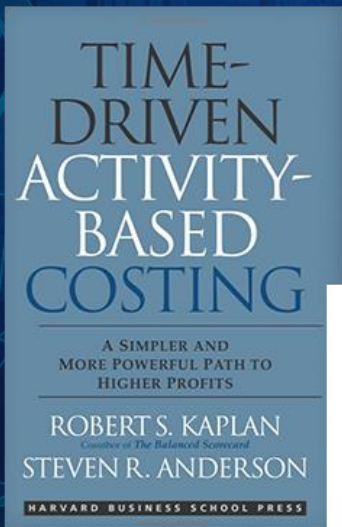


INNOVATOR
of SDN and NFV
technologies

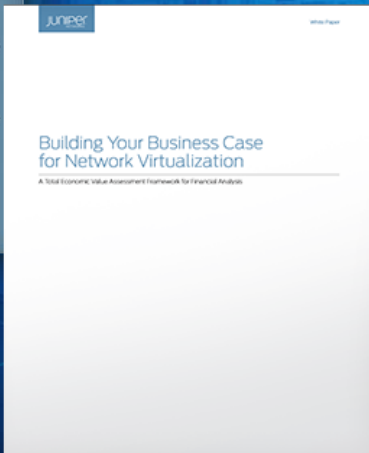


BUSINESS PARTNER
ready to help enable growth

RESOURCES



Robert S. Kaplan,
S. R. (2007)
Time-Driven Activity-
Based Costing
Boston
Harvard Business School Press



Building Your
Business Case for
Network
Virtualization
– Juniper
whitepaper



ARTICLES

Operating leverage

What is Leverage?
How One Company
Turned Business
Around Using Their
Operating Leverage



Activity-based costing

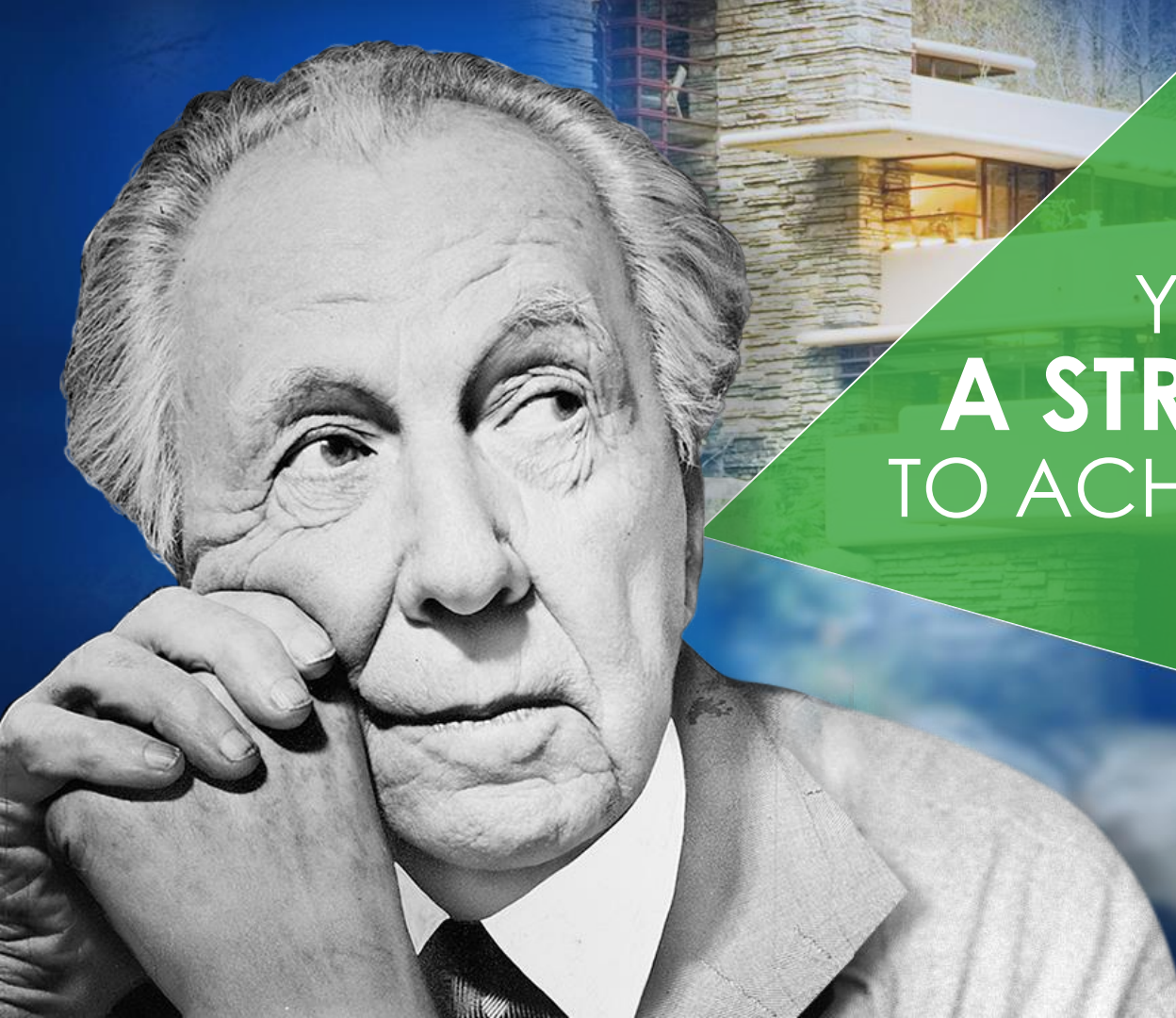
Activity-based
Management - An
Overview
Activity-based
Costing at UPS



Real options value

Examples of Real
Options in Practice
Making Real Options
Really Work





YOU WILL NEED
A STRONG TEAM
TO ACHIEVE SUCCESS

FRANK
LLOYD WRIGHT

HOW TO TALK TO THE CFO



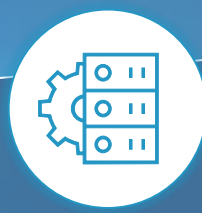
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Q&A