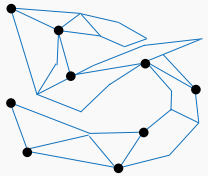
Data Application Lab

Business Development – Lead Generation

Outline

- Business Development Process (30 mins)
- Case 1: Web Scraping with PowerBI (30 mins)
- Case 2: Lead Scoring (20 mins)
- Sales Operations Overview (20 mins)
- Q&A (20 mins)
- Tools: PowerBI, Excel

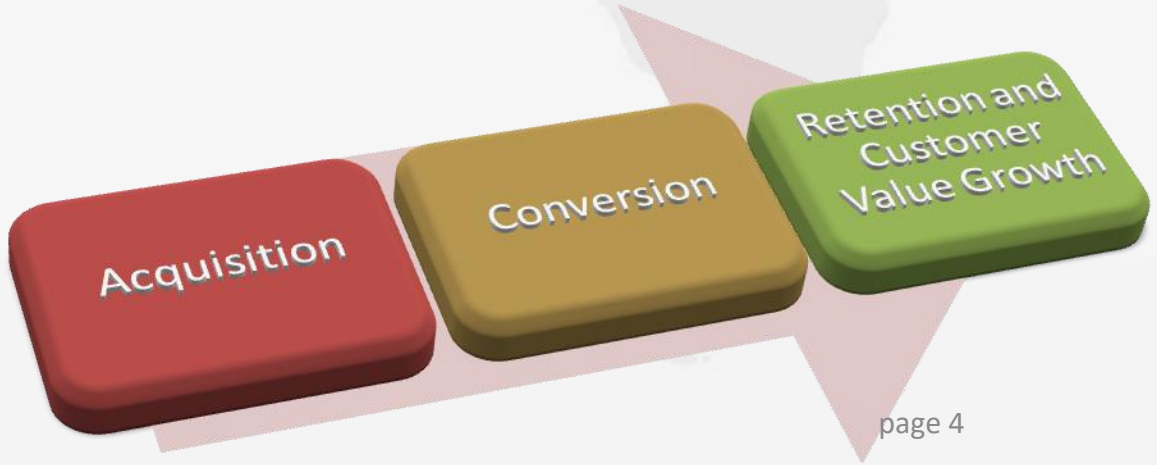


Q&A

Business Development

Success in Business:

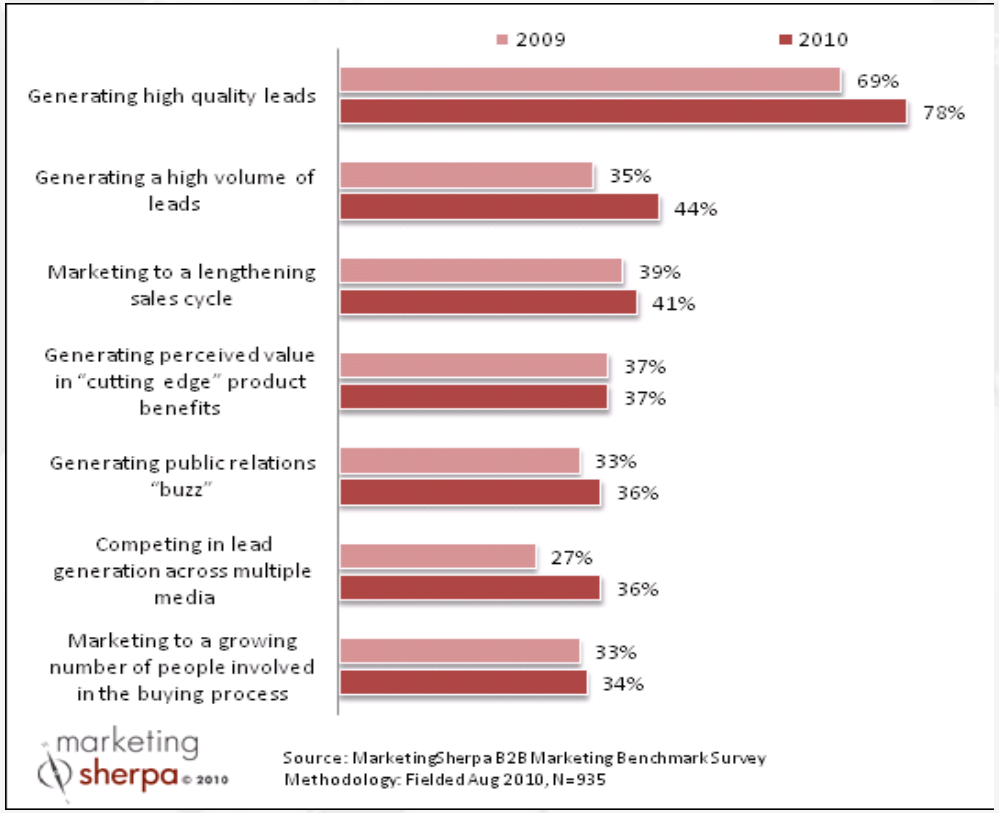
Getting the right customers … and keeping them.



WHAT IS A SALES LEAD?

Getting a Person to Self-Identify as a Potential Customer (Decision Maker)

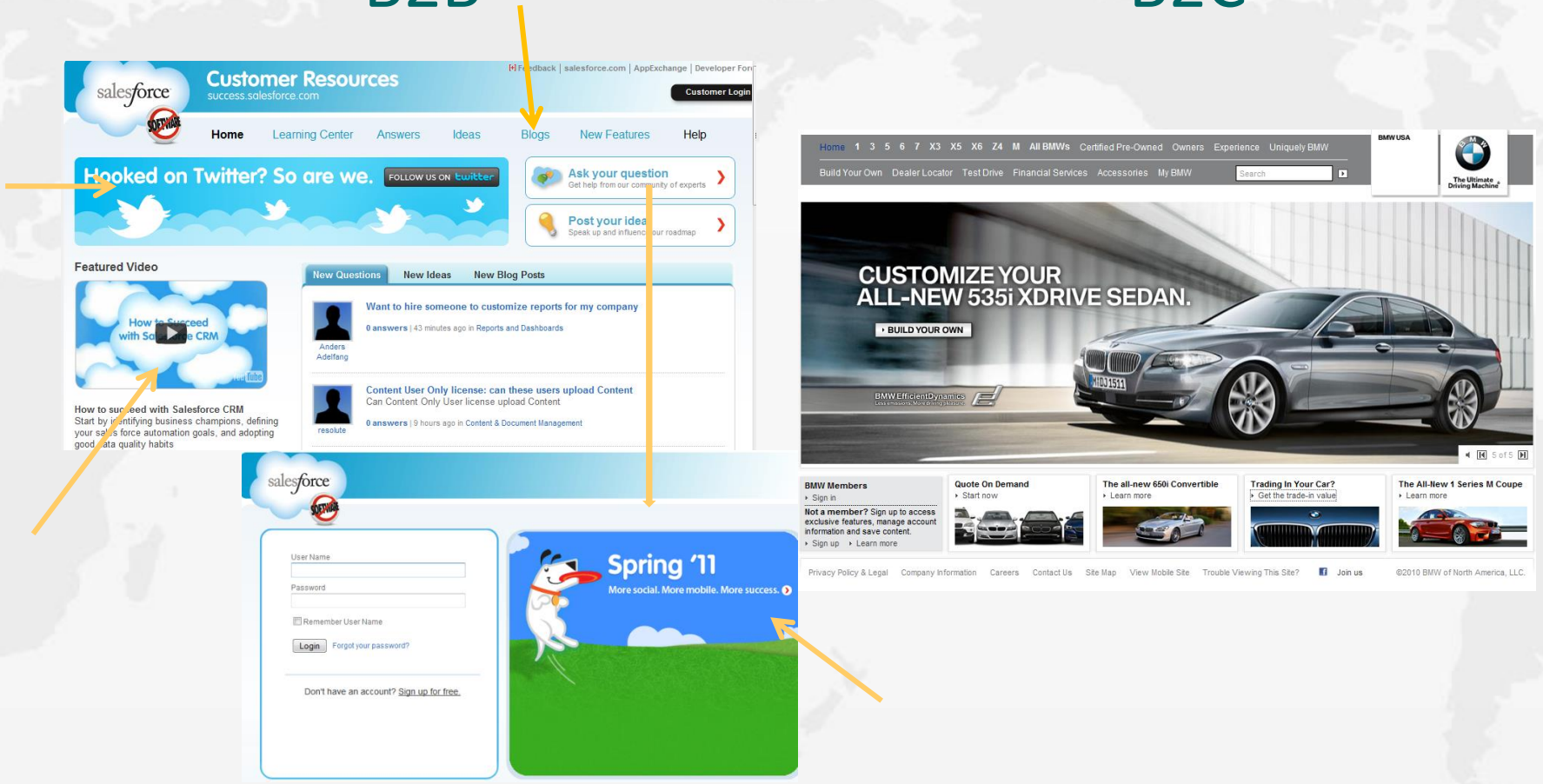
Key is to Generate High Quality Leads



What is "High Quality?"

How to Generate Leads?

- B2B
- B2C



Demand vs. Lead Generation

Lead Generation and Management Process

Generate Leads

Step 1. Define Your Customers

- Determining value?
- Revenue (over what period of time)
- Acquisition cost
- Direct cost
- Service cost (how is that tracked)
- Financing cost (including payment history)
- How do you account for Risk (attrition, losses…)
- Do you adjust value for referrals, influencers or other strategic value

Step 2. Define Your Target

- Geography
- Industry
- Size (#employees, $ revenue)
- Decision Maker (influencers)
- Title
- Financial condition
- History
- Prerequisites

Lead Generation

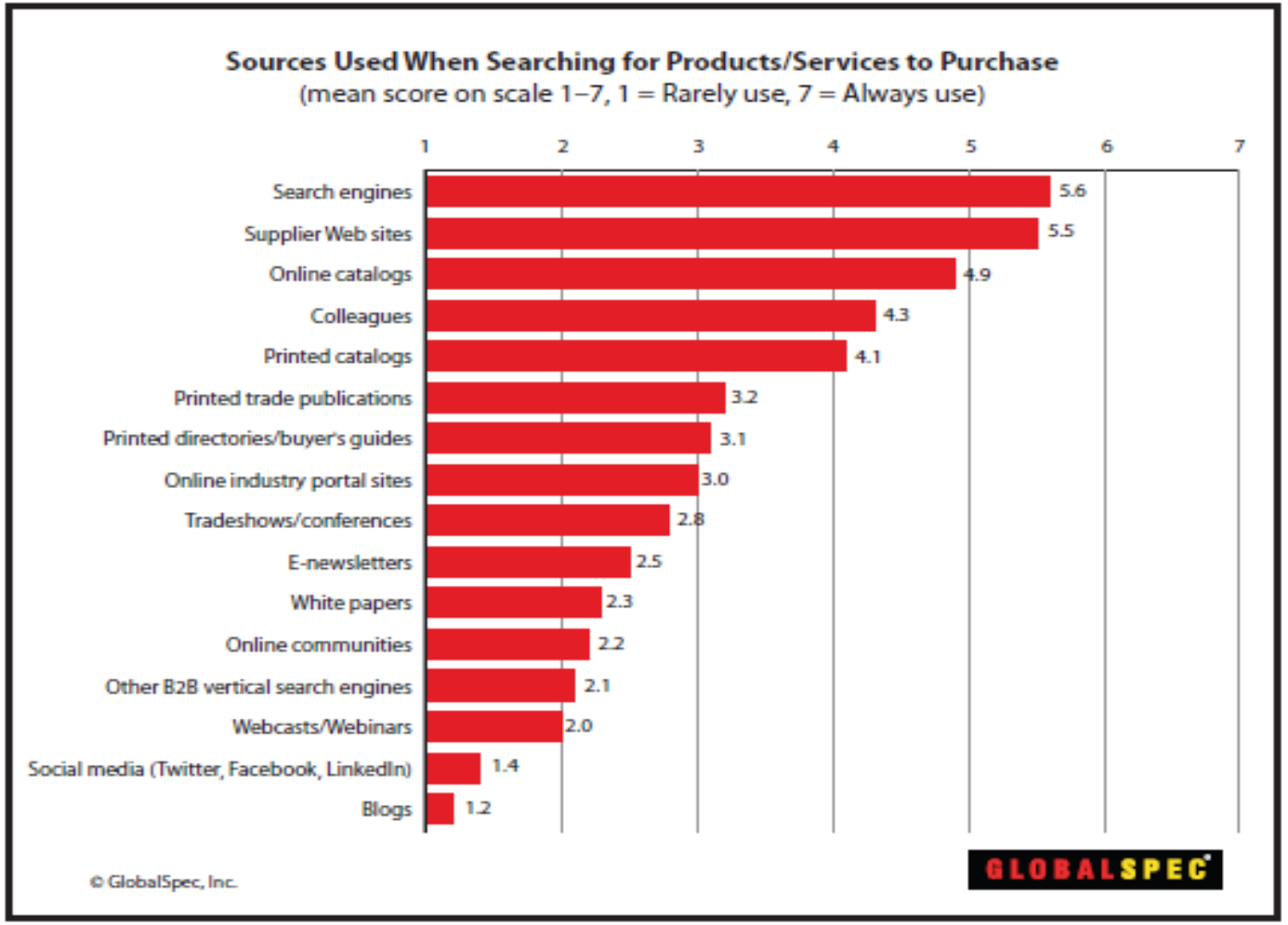
Customers can target their leads for B2B direct marketing, email marketing and telemarketing by selecting a variety of criteria including:

- **Company Selections**
- **Revenue**
- **No. of Employees**
- **Industry Verticals**
- **Public/Private Companies**

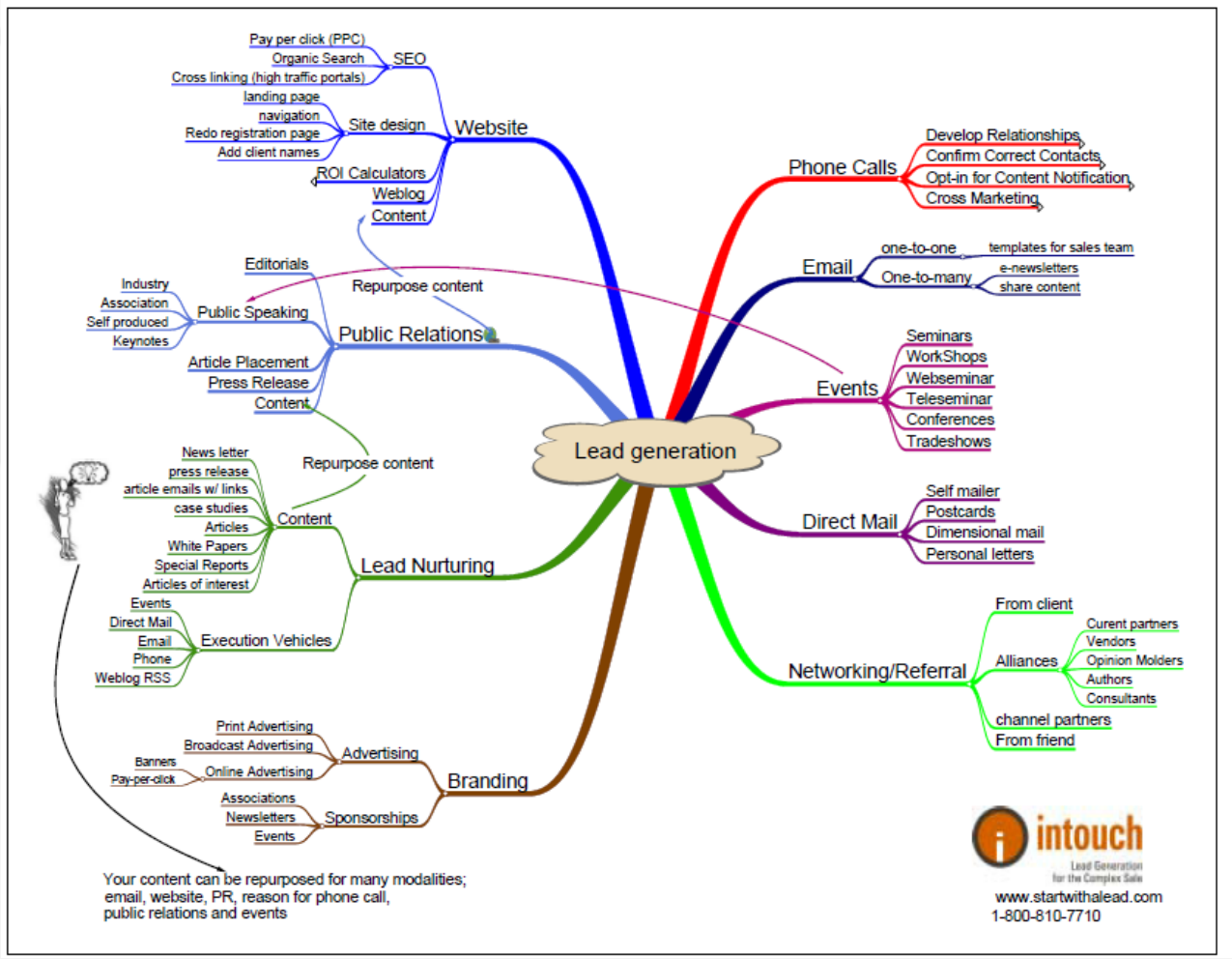
Personnel Selections

- Specify any title list (e.g. CTO, VP Marketing, Security Architect, Business Analyst).
- Corporate data like headquarter address, phone number, and regional address.

Know the Target Market



Channels of Lead Generation



Step 3. Identify Data Sources

- Primary Data:
- Lead List from other Business Divisions (Risk of Cannibalization)

- Third Party (Secondary) Data:
- Dun & Bradstreet
- Hoover
- Public Database
- Web Crawling

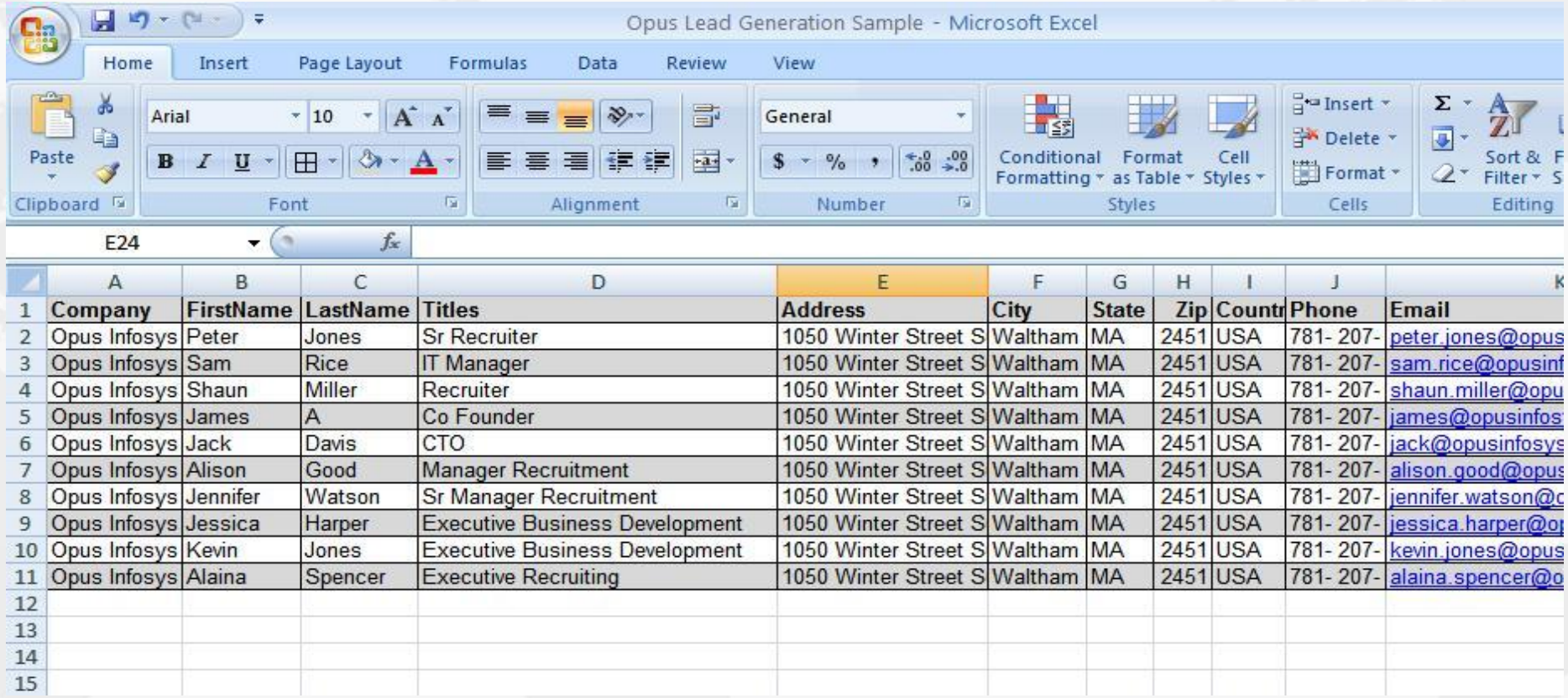
Data Acquisition

- 80+ Paid Websites
- Organizational Surveys
- Corporate Reports & Directories
- Trade Show Events and headhunting

spoke
demandbase
HOOVERS A D&B COMPANY
infoUSA.com
Jigsaw
Google
Lead 411
zoominfo find people and companies

and many more…

Step 4. Acquire Data and Generate Lead List



	A	B	C	D	E	F	G	H	I	J	K
1	Company	FirstName	LastName	Titles	Address	City	State	Zip	Countr	Phone	Email
2	Opus Infosys	Peter	Jones	Sr Recruiter	1050 Winter Street S	Waltham	MA	2451	USA	781- 207-	peter.jones@opus
3	Opus Infosys	Sam	Rice	IT Manager	1050 Winter Street S	Waltham	MA	2451	USA	781- 207-	sam.rice@opusinf
4	Opus Infosys	Shaun	Miller	Recruiter	1050 Winter Street S	Waltham	MA	2451	USA	781- 207-	shaun.miller@opu
5	Opus Infosys	James	A	Co Founder	1050 Winter Street S	Waltham	MA	2451	USA	781- 207-	james@opusinfos
6	Opus Infosys	Jack	Davis	CTO	1050 Winter Street S	Waltham	MA	2451	USA	781- 207-	jack@opusinfosys
7	Opus Infosys	Alison	Good	Manager Recruitment	1050 Winter Street S	Waltham	MA	2451	USA	781- 207-	alison.good@opus
8	Opus Infosys	Jennifer	Watson	Sr Manager Recruitment	1050 Winter Street S	Waltham	MA	2451	USA	781- 207-	jennifer.watson@o
9	Opus Infosys	Jessica	Harper	Executive Business Development	1050 Winter Street S	Waltham	MA	2451	USA	781- 207-	jessica.harper@op
10	Opus Infosys	Kevin	Jones	Executive Business Development	1050 Winter Street S	Waltham	MA	2451	USA	781- 207-	kevin.jones@opus
11	Opus Infosys	Alaina	Spencer	Executive Recruiting	1050 Winter Street S	Waltham	MA	2451	USA	781- 207-	alaina.spencer@o
12											
13											
14											
15											

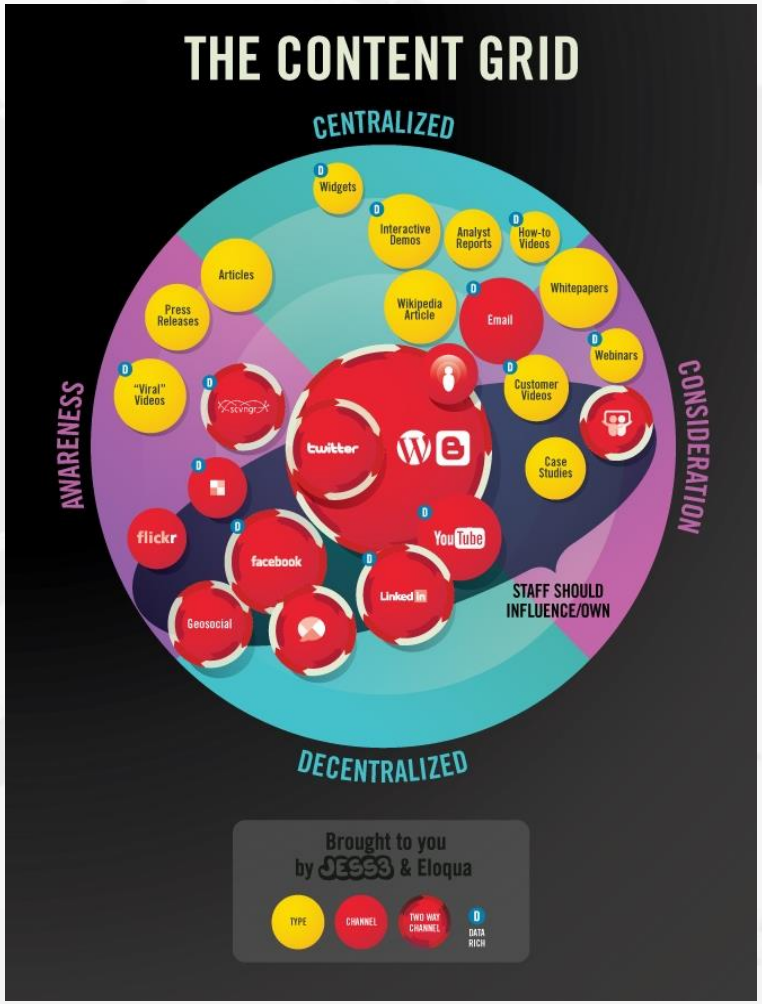
* Complete list is 100% email & phone verified.
* Additional information like SIC code, Number of Employees , Turnover/Sales, Industry & Website etc. can also be provided .

Inbound Marketing

Outbound	Inbound
Print Ads	Blogs, Ebooks, White Papers
Television Ads	Viral YouTube Videos
Cold Calling	Search Engine Optimization
Trade Shows	Webinars
Email Blasts	Feeds, RSS

Components of Inbound Marketing

Content Marketing



CONTENT MARKETING

- **Story Telling**
- **Repurposing Content**

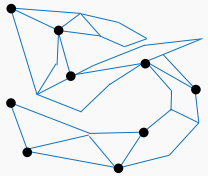
INFORMATIONAL CONTENT

Key Metrics

- Blog
- Public Relations
- PPC

- Metrics
- 1200 Visits
- 107 Registered for Webinar
- 4 Proposals

Case 1: Web Scraping using PowerBI



Qualify Leads

Lead Scoring Considerations

- Desire for the product or service
- Authority to make the purchase decision
- Money, a budget for making the purchase
- Need, the product will provide the desired benefits to the customer

Good Qualifications

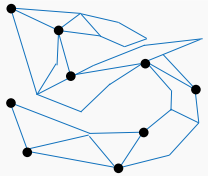
Lower Cost
Higher Conversion Rate

	100	70	7

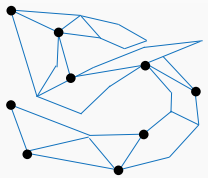
	Annual cost	Hourly cost
Loaded cost/ Field sales rep	$ (200,000)	$ (102)

	Leads	Hours	Cost/Hour
New leads	100	40	$ (4,082)
Valid leads	70	34	$ (3,469)
Sales-ready leads	7	2.8	$ (286)

Assumes 1,960 hours per year and 19,600 dials.



Case 2: Lead Scoring



Distribute Leads

Lead Distribution Process

Hot (Sales-Ready) Leads

- Distribute to Sales Force for Immediate Follow-up

Valid, Non-Sales Ready Leads

- Distribute to Appropriate Communications Mode
  - Call Center for Highly Qualitied (Definite Purchase Time Frame)
  - Email Newsletter for Other (No Budget, No Firm Purchase Timetable)
- Rescore at Stated Intervals and Reclassify as Warranted

Cold Leads (Meet No Qualifying Criteria)

- No or Low Cost Followup
- Rescore at Stated Intervals and Reclassify (to Valid or Inactive) as Warranted

Analytics Considerations

REQUIRES

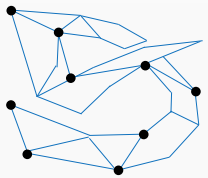
- Good Database
- Accurate Scoring Model
- Disciplined Operations
- COOPERATION BETWEEN MARKETING FUNCTIONS

Follow Up to Convert

Lead Conversion

- Identify Conversion Goals & Key Performance Indicators
- Define & Acquire Target Profiles
  - Reach the Right People with the Right Message at the Right time
- Organize, Optimize Web Site
- Develop Compelling Message
- Provide Effective Calls to Action
- Enhance Shopping Cart (B2C) and Lead Capture (B2B) Process
- Test, Measure, Refine

Conversion Funnel



Questions?

Sales Management

- The goal is agreement between various departments on the best course of action to achieve the optimal balance between supply and demand and to meet profitability goals.

- Involving:
- Current plan for each product group
- Current finished goods inventory
- Sales forecasts
- Purchase Orders received
- Materials available
- Manufacturing plans and capacity
- Distribution capacity
- Shipping capacity
- Performance measures
- Customer Service

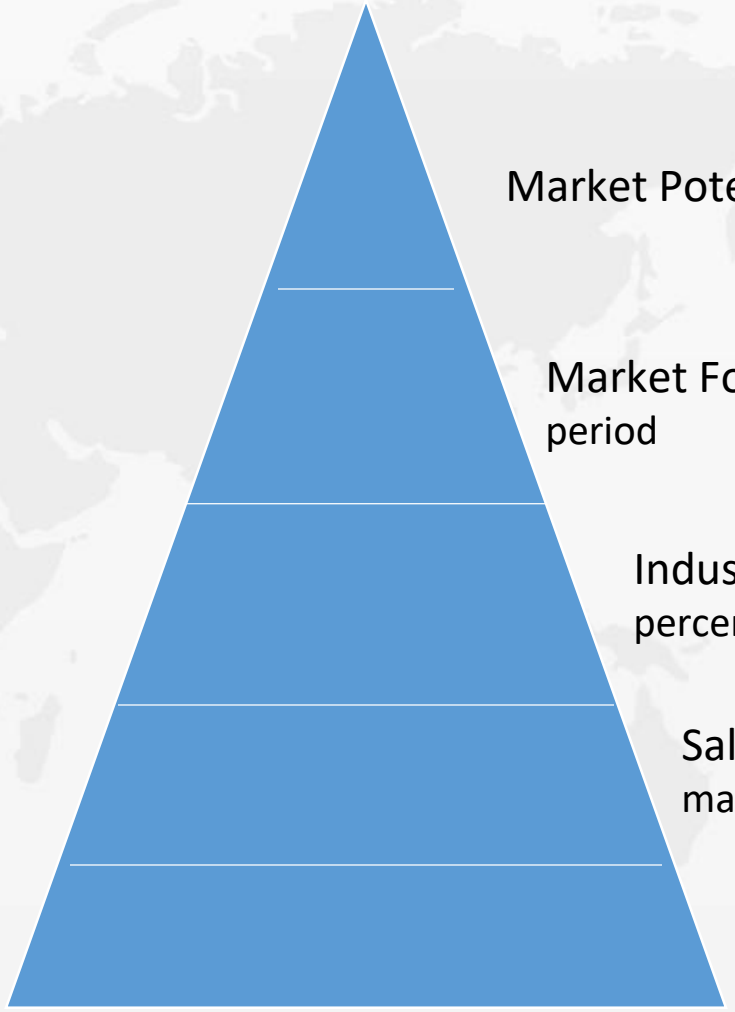
Forecasting

- Forecasting is a very difficult task, both in the short run and in the long run.
- Analysts search for patterns or relationships in historical data and then make forecasts.
  - There are two problems with this approach:
    - It is not always easy to undercover historical patterns or relationships.
      - It is often difficult to separate the noise, or random behavior, from the underlying patterns.
      - Some forecasts may attribute importance to patterns that are in fact random variations and are unlikely to repeat themselves.
    - There are no guarantees that past patterns will continue in the future.

Forecasting Time Horizons

- Short-range forecast
  - Up to 1 year, generally less than 3 months
  - Purchasing, job scheduling, workforce levels, job assignments, production levels
- Medium-range forecast
  - 3 months to 3 years
  - Sales and production planning, budgeting
- Long-range forecast
  - 3+ years
  - New product planning, facility location, research and development

Types of Forecasts



Market Potential: All potential customers

Market Forecast: Those who will buy during this forecast period

Industry Sales: Forecast of all sales for this industry (as a percent of market forecast)

Sales Potential: Firms sales given maximum marketing effort

Sales Forecast: Firm's sale given a specific marketing program

Forecasting Approaches

- **Qualitative Methods**
  - **Used when situation is vague and little data exist**
  - **Involves intuition, experience**
- **Quantitative Methods**
  - **Used when situation is ‘stable’ - historical data exist**
  - **Involves mathematical techniques**

Forecasting Methods

Association/Causal

- Naïve
- Correlation
- Regression Models
- Leading Indicators
- Econometric Models
- Input-Output Models

Time-Series

- Moving Averages
- Exponential Smoothing
- Adaptive Filtering
- Time-Series Extrapolation
- Times Series Decomposition
- Box-Jenkins

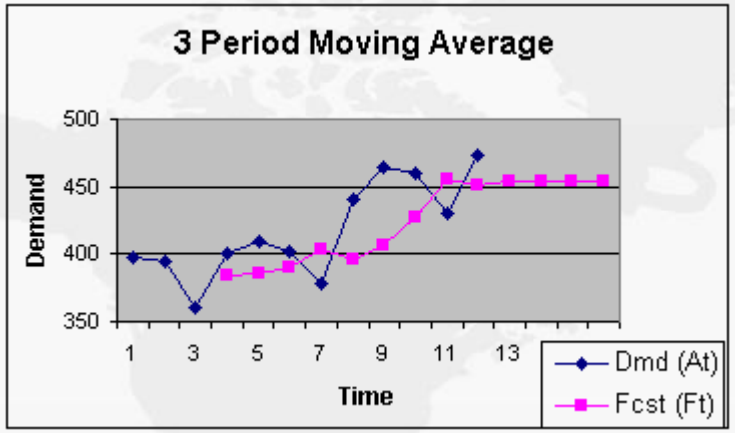
The Naïve Model

$$Y_t = Y_{t-1}$$

If your time series exhibits little variation from one period to the next, has no discernible trend, and is unaffected by seasonality, the naïve model is just what you need.

The Moving Average Model

$$Y_t = \frac{Y_{t-1} + Y_{t-2} + \ldots + Y_{t-n}}{n}$$



For example, if *n* = 3, you have a 3-period moving average model.

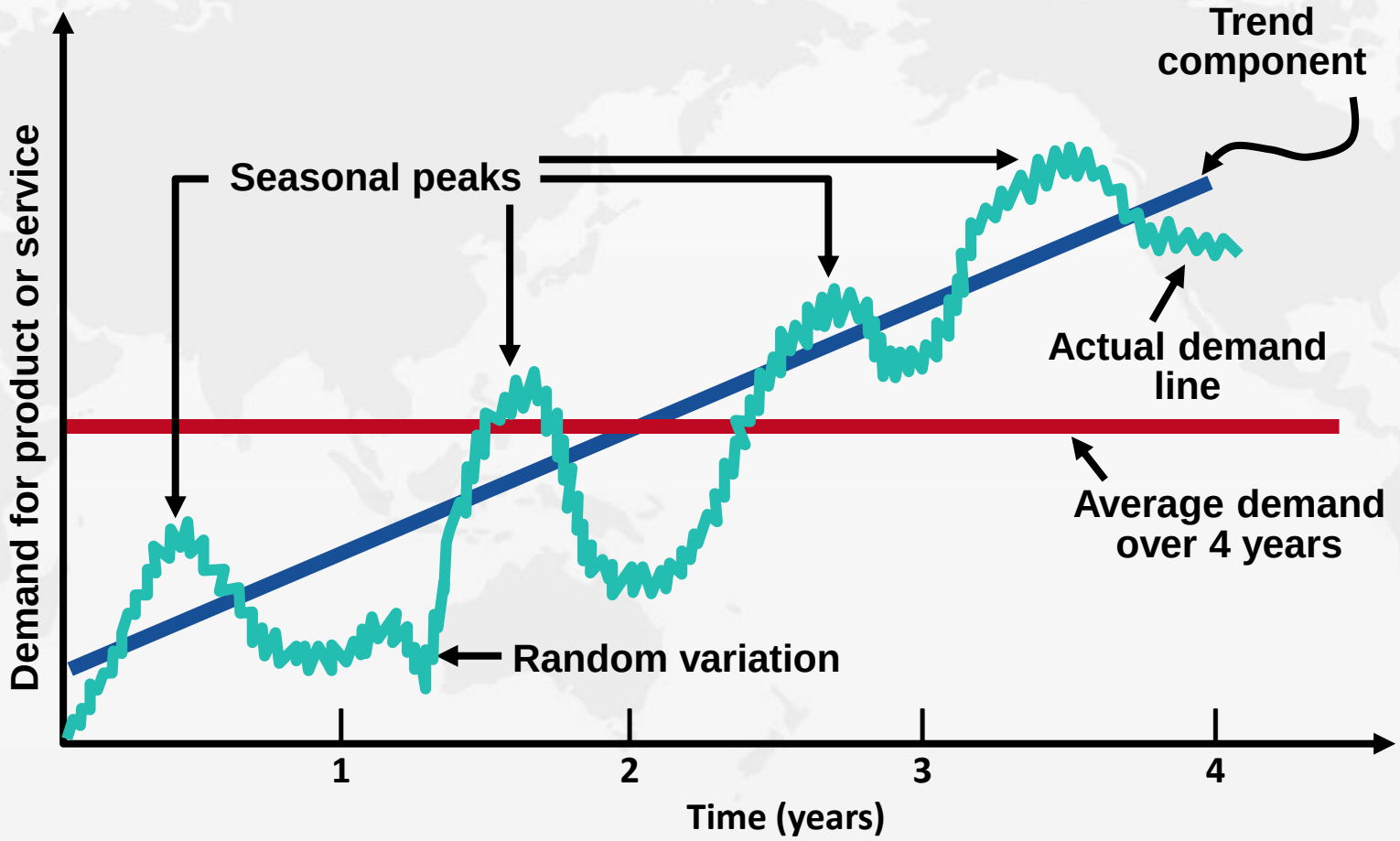
The Weighted Moving Average Model

$$Y_t = \omega_1 Y_{t-1} + \omega_2 Y_{t-2} + \ldots + \omega_n Y_{t-n}$$

The ω's are the weights attached to past observations of the time series variable and there are n periods weighted. Notice that: $\Sigma\omega_i = 1$.

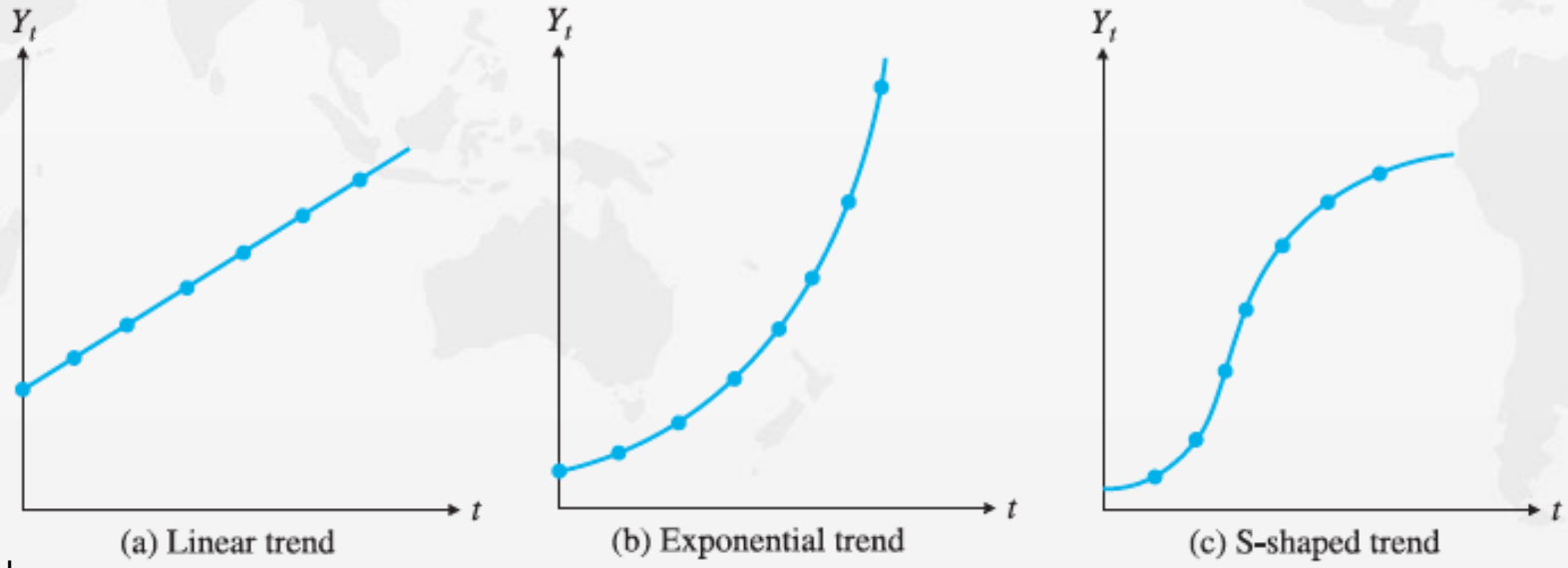
The trick is to select the value of n and corresponding values of so as to minimize MSE

More Complicated --- Time Series



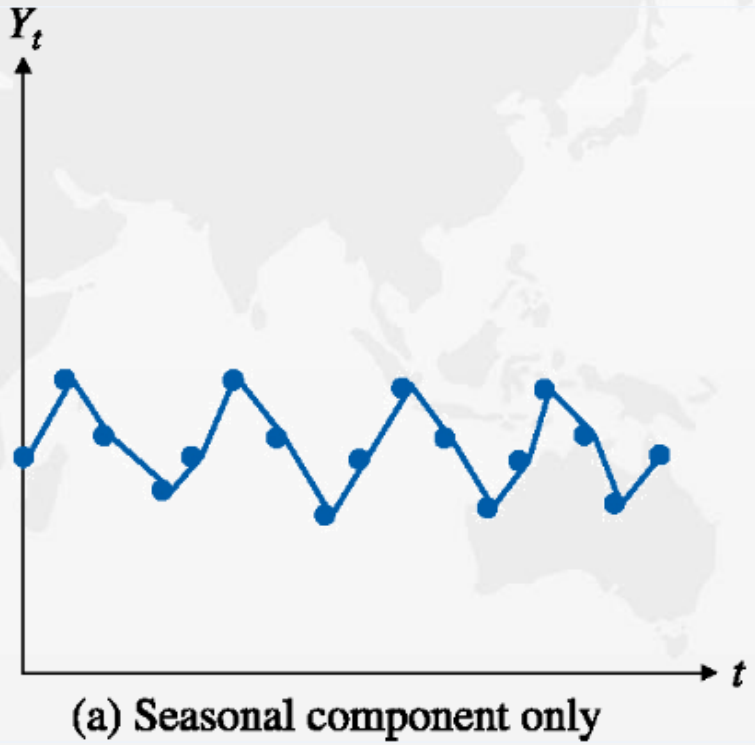
Components of Time Series Data

- If observations increase or decrease regularly through time, the time series has a **trend**.
  - *Linear* trend—occurs if the observations increase by the same amount from period to period.
  - *Exponential* trend—occurs when observations increase at a tremendous rate.
  - *S-shape* trend—occurs when it takes a while for observations to start increasing, but then a rapid increase occurs, before finally tapering off to a fairly constant level.

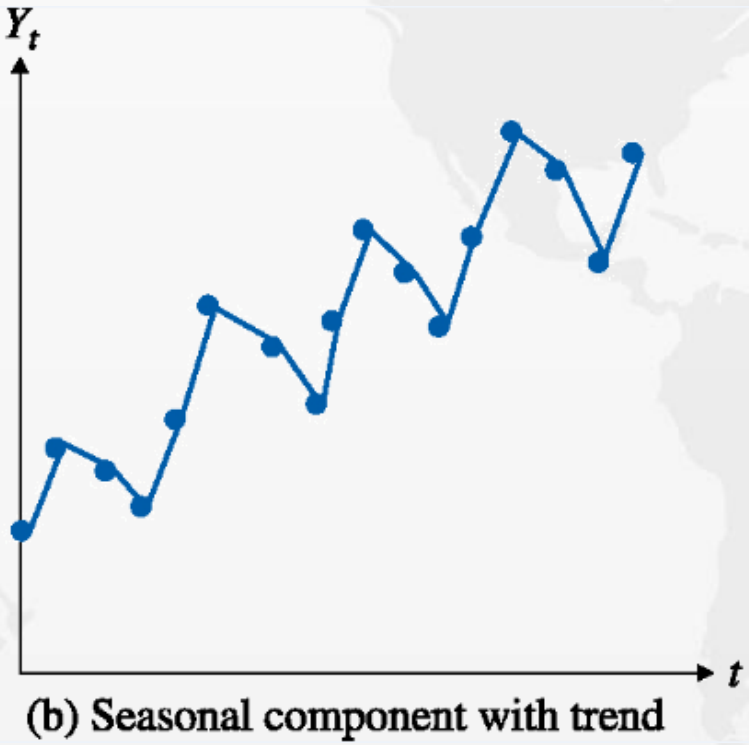


Components of Time Series Data

- If a time series has a *seasonal* component, it exhibits **seasonality**—that is, the *same* seasonal pattern tends to repeat itself every year.



(a) Seasonal component only

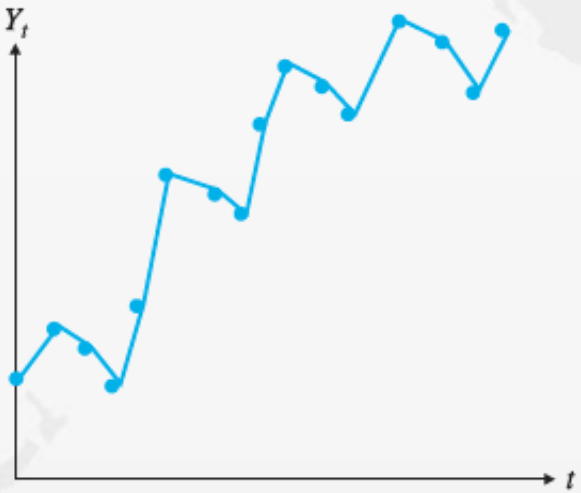


(b) Seasonal component with trend

Components of Time Series Data

- A time series has a **cyclic component** when business cycles affect the variables in similar ways.
  - The cyclic component is more difficult to predict than the seasonal component, because seasonal variation is much more regular.
  - The length of the business cycle varies, sometimes substantially.
  - The length of a seasonal cycle is generally one year, while the length of a business cycle is generally longer than one year and its actual length is difficult to predict.

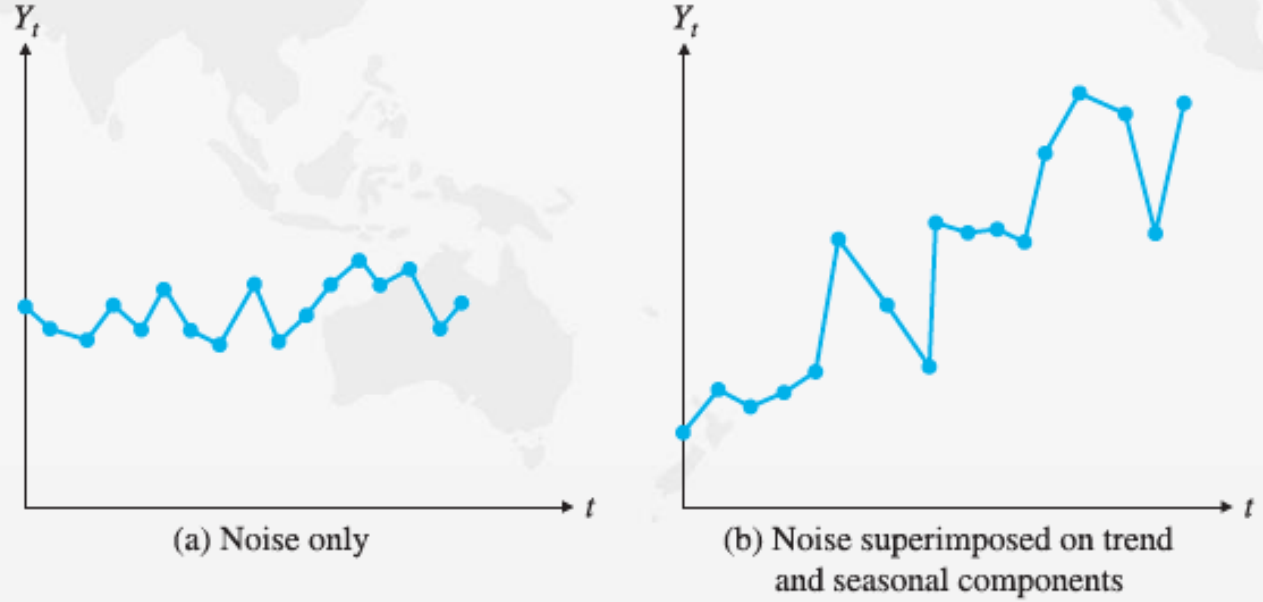
(a) Cyclic component only



(b) Cyclic component with seasonality and trend

Components of Time Series Data

- **Random variation** (or **noise**) is the unpredictable component that gives most time series graphs their irregular, zigzag appearance.
  - A time series can be determined only to a certain extent by its trend, seasonal, and cyclic components; other factors determine the rest.
  - These other factors combine to create a certain amount of unpredictability in almost all time series.



(a) Noise only

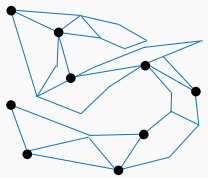
(b) Noise superimposed on trend and seasonal components

Measures of Accuracy

- The **forecast error** is the difference between the actual value and the forecast. It is denoted by *E* with appropriate subscripts.
- Forecasting software packages typically report several summary measures of the forecast errors:
  - **MAE (Mean Absolute Error)**: $$\text{MAE} = \left(\sum_{t=1}^{N} |E_t| \right) / N$$
  - **RMSE (Root Mean Square Error)**: $$\text{RMSE} = \sqrt{\left(\sum_{t=1}^{N} E_t^2 \right) / N}$$
  - **MAPE (Mean Absolute Percentage Error)**: $$\text{MAPE} = 100\% \times \left(\sum_{t=1}^{N} |E_t / Y_t| \right) / N$$
- One other measure of forecast errors is the *average* of the errors.

Further Reading and Assignment

https://www.analyticsvidhya.com/blog/2015/12/complete-tutorial-time-series-modeling/



Q&A