**Ipsos Capstone - Project Control Plan**

1. Operational Definition of the Analytic Research Problem
   1. Problem: Ipsos has been unable to develop an accurate election forecasting model, preventing predictions of election outcomes.
   2. Task: SIPA’s Ipsos Capstone Group will develop an election forecasting model and supporting documentation no later than 30 April 2016 in order to complete capstone requirements and provide a working solution for the client.
   3. Research Requirements:
      1. Previous election forecasting literature
         1. What are the most important data points to predict the outcome of an election?
         2. Could include: polling data, GDP, incumbent status, etc.
      2. Past models
         1. What variables were included and why
         2. Structure of model; weighted, Bayesian, etc.
      3. Polling data
2. Situation – Academic literature, models, and available data
   1. Description of Available Data and Literature
      1. Incomplete dataset created by Ipsos needs to be built out
   2. Discussion of Data Needs
      1. Polls
         1. Polling dates
         2. Sample size
         3. Margin of Error
         4. Polling firm name
         5. Approval rating/poll results
      2. Outside data (if authorized)
         1. GDP forecasts
         2. Demographic Data
      3. Pollster bias (poll results vs. election results)
      4. Methodology bias (type of poll vs. election results)
      5. Information Requirements – See Annex B
   3. "First Cut" of Study Design and Methodology
      1. How data will be collected
         1. <http://elections.huffingtonpost.com/pollster/api>
         2. Pull from pollster websites
      2. Model design
         1. Create in Excel unless directed otherwise
         2. Implement Bayesian forecasting method
         3. Input as many poll sources as possible, including outside firms
            1. Account for pollster bias
            2. Account for methodology bias
         4. Input GDP forecasts
      3. Test model
         1. Monte Carlo, PCA, etc.
         2. Test with different election results across countries
   4. Draft Outline of Final Report
      1. Introduction
         1. Problem statement
         2. Task
      2. Review of salient literature
      3. Review of outside models
      4. Model design
         1. Inputs – polling results, GDP, etc.
         2. Model methodology – weights, changes to inputs (bias accounting), etc.
         3. Output – election forecast
      5. Model applicability and examples
         1. Examples to show accuracy and methods of use
         2. Three example elections with supporting models
      6. Conclusion
3. Execution
   1. Basic task overview
      1. Review Literature and Models
         1. Which proved best?
         2. What other data is required?
      2. Develop Initial Model Design
         1. Develop survey instruments and/or other data-collection strategies
         2. Pose study hypotheses
      3. Collect Data
         1. Poll API
         2. Polling firm web sites. Contact firms for historical data?
      4. Analyze Data
         1. Relate data to study hypotheses
         2. Develop and implement final analytic strategy
      5. Develop Final Model Design
      6. Develop Preliminary Report
         1. Summarize preliminary findings
         2. Brief client
      7. Develop Draft Report
         1. Outline draft report
         2. Assigning writing tasks
         3. Edit draft report
      8. Develop Workshop Briefing
         1. Assign responsibilities
         2. Develop A/V materials (PowerPoint, etc.) and briefing book
         3. Conduct dry run
      9. Write Final Report
         1. Write outline and review with client
         2. Assign writing tasks
         3. Edit final report
   2. Schedule of tasks – see Annex A
4. Assignment of Possible Roles/Responsibilities – See Annex C for team guidelines
   1. Project Manager
      1. Name: Adam Stoddard
      2. Specific lead responsibilities
         1. Project Control Plan development
         2. Timeline creation
         3. Meeting management
   2. Client Liaison/SIPA Liaison
      1. Name: Juan Manuel Puyana
      2. Specific lead responsibilities
         1. Maintain contact with Ipsos
         2. Maintain contact with SIPA
   3. Secretary
      1. Name: Matthew McMahon
      2. Specific lead responsibilities
         1. Meeting minutes/notes
         2. Calendar and task management
   4. Data Managers
      1. Names: Na Wei, Xiaozhi Wang
      2. Specific lead responsibilities
         1. Data subject matter experts
         2. Literature subject matter experts
         3. Database creation and maintenance

**Annex A - Project Timeline**

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| **January 19th** | **First day of classes** |
| Week of January 19th Meeting | * Client meets/conferences with Capstone team * Initial meeting – review plan * Determine secondary meeting time * Roles and responsibilities * Assign literature review and model review tasks |
| Before week of January 25th | *Suggested:* Complete Project Teambuilding Form and develop team Code of Conduct |
| **January 25th** | **Capstone Project Management Basics | Room 1501 IAB | 1:00-3:00pm** |
| Week of January 25th Meeting | * Review literature and models * Develop initial model (Excel/code?) * Determine data collection requirements, task to collect data (limited collection) |
| **January 31st** | **SIPA Liaison is selected.** |
| Week of February 1st Meeting | * Model development (continued) * Begin testing with limited data |
| **February 2nd** | **Interviewing Skills Session w/ Prof. Anya Schiffrin |** |Room 1501 IAB |1:00-3:00pm |
| **February 3rd** | **Orientation for SIPA Liaison** | Room 1512 IAB |1:00-2:00pm |
| Week of February 8th Meeting | * Input data into initial model and test for accuracy * Refine model * Determine whether outside data is appropriate * Determine new data collection requirements; task to collect data (full collection) |
| February 10th | Deadline to confirm availability for your team’s midterm presentation timeslot |
| Week of February 15th Meeting | * Final model development * Data collection (continued) |
| Week of February 22nd Meeting | * Final model development (continued) * Finalize data collection |
| Week of February 29nd Meeting | * Model/Data collection complete * Begin documentation development |
| February 29th- **9:00am** | Deadline for SIPA Liaison to submit a 250-word abstract of Capstone project to be used for presentations. It is the responsibility of each team to bring supporting materials (i.e. PowerPoint, handouts, etc.) to the presentation via flash drive, email, DropBox, etc.) |
| **March 3rd & 4th** | **SIPA Capstone Midterm Presentations** | 15th Floor, IAB | 9:00am-5:00pm  *Specific schedule will be sent out in early February* |
| Week of March 7th Meeting | * Students complete first Peer Assessment Form * Midterm briefing to client on project’s progress * Documentation development (continued) |
| March 14th-18th | **Spring Break**—No classes |
| Week of March 21st Meeting | * Documentation development (continued) |
| Week of March 28th Meeting | * Documentation development (continued) |
| Week of April 4th Meeting | * Finalize Documentation * Begin briefing rehearsals |
| Week of April 11th Meeting | * Written draft report or initial findings submitted to client * Briefing rehearsals (continued) |
| Week of April 18th/25th | Client briefing of Project findings |
| April 21st | Deadline to submit prospectus for consideration to present at SIPA Capstone Closing Reception |
| **Before May 2nd** | **Final Report and briefing due to client** |
| Week of May 2nd | Students complete final Peer Assessment Form |
| **May 5th** | **SIPA Capstone Closing Reception** | 15th floor, IAB | 4:00pm-5:30pm |
| TBD | Students complete SIPA Course Evaluation of Capstone course via CourseWorks |
| **May 13th** | **Final deliverables and an updated 250-word abstract are due to SIPA. All Travel/Business expense reimbursement forms are due to SIPA.** |
| May 18th | University Commencement |
| May 19th | SIPA Graduation |

**Annex B – Information Requirements**

1. Does Ipsos have a model already developed? If so, why is it insufficient?
2. What format does the model need to be in? Excel, R, Python?
3. What types of outside data are allowed?
   1. Polling data from firms other than Ipsos?
   2. GDP, incumbency, other salient variables?
   3. Less outside data will expand applicability of model, more will restrict it (i.e. demographics that support a certain party/candidate will be more difficult to apply internationally)
4. Model designed for US, international elections, or subnational elections?

**Annex C – Team Guidelines**

1. Team Objectives: SIPA’s Ipsos Capstone Group will develop an election forecasting model and supporting documentation no later than 30 April 2016 in order to complete capstone requirements and provide a working solution for the client.
2. Shared Principles
   1. Equality of effort – team members will put in equal work.
   2. Timeliness and preparedness – team will be on time and prepared for each meeting.
   3. Communication – team will communicate results, challenges, and personal items openly and in a timely manner.
3. Potential Obstacles or Challenges to Achieving the Team Objective(s)
   1. Varied modeling knowledge – team has significant knowledge across multiple modeling domains (Excel/R/Python/Stata), and a unified model format will be necessary.
   2. Graduation timeline/other coursework
4. Key Team Functions (faculty contact; client contact; project manager; SIPA liaison; etc.)
   1. Project Manager
      1. Name: Adam Stoddard
      2. Specific lead responsibilities
         1. Project Control Plan development
         2. Timeline creation
         3. Team management
   2. Client Liaison/SIPA Liaison
      1. Name: Juan Manuel Puyana
      2. Specific lead responsibilities
         1. Maintain contact with Ipsos
         2. Maintain contact with SIPA
   3. Secretary
      1. Name: Matthew McMahon
      2. Specific lead responsibilities
         1. Meeting minutes/notes
         2. Calendar and task management
   4. Data Managers
      1. Names: Na Wei, Xiaozhi Wang
      2. Specific lead responsibilities
         1. Data subject matter experts
         2. Literature subject matter experts
         3. Database creation and maintenance
5. Core Meeting Times (in addition to class time, at least 2 additional hours when everyone is available per week)
   1. Class time: Wednesday 2:10pm-4:00pm IAB 823.
   2. Second time determined no later than first week of class.
6. Ground Rules (should cover topics such as communications; setting and management of meetings including agenda/conduct/minutes; possible rotation of roles/responsibilities; decision-making; allocation of work; and consequences for team members who don’t follow the rules)
   1. Communication: Slack for internal communication, email for SIPA/Client liaison. Dropbox for data files.
   2. Meeting format
      1. Team check-in (resolve issues, ensure team is functioning as required).
      2. Develop meeting goals (initial goals by project manager, team adds as necessary).
      3. Conduct meeting/discussion.
      4. Finalize requirements for next meeting – assign tasks.
   3. Decision-making – simple majority, with instructor approval
7. Resolution of Problems (the team’s strategy for minimizing and resolving disagreements or other problems that may arise – e.g., regular communication; regular “check-in” on team dynamics at the start of meetings; brainstorming or use of a mediator to resolve disagreements between team members)
   1. Solve at the lowest level possible between team members.
   2. If unable to resolve, bring the issue to the project manager.
   3. If the issue continues to persist, it will be brought to the instructor.