

6. 別添資料

6.1 大学トップマネジメント研修参加者用資料（抜粋）

大学トップマネジメント研修

研修参加者用：資料

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I. 大学トップマネジメント研修 研修予定日程

第1回 国内プログラム：2016年9月30日（金）～10月2日（日）

第2回 国内プログラム：2016年12月16日（金）～12月18日（日）

シンガポール国立大学研修：2017年1月24日（火）～1月26日（木）（現地研修期間）

シカゴ大学研修：2017年1月24日（火）～1月27日（金）（現地研修期間）

第3回 国内プログラム：2017年2月25日（土）

カリフォルニア大学サンディエゴ校研修：2017年2月27日（月）～3月10日（金）
（現地研修期間）

研修報告会 2017年3月18日（土）～3月19日（日）

- ※ 本年度のカリフォルニア大学サンディエゴ校研修は、先方の都合により定員が定められているため、原則1大学1名の派遣とさせていただきますので、何卒ご理解のほど宜しくお願い申し上げます。
- ※ 短期インターンプログラムにつきましては、現在調整中のため、調整がつき次第若干名を募集する予定であります。
- ※ 日程が変更になった場合、速やかにご連絡を致します。

II. 研修内容の概要(初回)

第1回国内プログラム：9月30日（金）～10月2日（日）

【研修内容】 第1回国内プログラム第1日目は、本研修の趣旨説明と研修参加者の交流を深めて頂くとともに、長年、コロンビア大学のプロボストとしてコロンビア大学の改革に尽力された Jonathan Cole 氏をお招きした公開セミナーにご参加頂きます。第2日目、第3日目は、Jonathan Cole 氏とともに米国のトップ研究大学の経営戦略や予算配分等について学んで頂くとともに、国内有識者の講義を通じて、大学の財務会計や戦略的な研究経営に関して理解を深めて頂きます。

【時間割】

9月30日(金) 場所:1C

12:30-14:00 導入 (本研修の趣旨、研修参加者の自己紹介等)

【講師】 上山隆大氏(内閣府総合科学技術・イノベーション会議常勤議員)

14:30-17:40 研究大学の展望(公開セミナー) 場所:1ABC

14:30-15:00 上山隆大氏(内閣府総合科学技術・イノベーション会議常勤議員)による背景説明・講師紹介

15:00-16:00 Jonathan Cole 氏(John Mitchell Mason Professor of the University, Provost and Dean of Faculties, Emeritus - Columbia University)による講演

16:10-16:40 パネル報告者

16:40-17:40 パネルディスカッション

10月1日(土) 場所:1AB

10:00-12:00 Jonathan Cole 氏とのワークショップ

【講師】 Jonathan Cole 氏(John Mitchell Mason Professor of the University, Provost and Dean of Faculties, Emeritus - Columbia University)

13:00-15:00 大学の研究経営論:国際競争力をつけるためのトップマネジメントとアントレプレナー戦略

【講師】 菅裕明氏(東京大学大学院理学研究科化学専攻生物有機化学教室教授、ペプチドリーム株式会社社外取締役)

【概要】 海外の大学との研究環境、研究者の処遇、等を比較して、国際競争力をつけていく大学改革・トップマネジメントとはどうあるべきか、戦略を含め議論する。

15:20-17:20 大学の財務会計論:国立大学法人の財政・会計とガバナンスについて

【講師】 宮内忍氏(宮内公認会計士事務所、公認会計士)

【概要】 独立行政法人の一類型としての国立大学法人の社会制度的ガバナンス構造の特質と、その結果生ずる財政構造の特徴を説明し、そのことを前提とする国立大学法人の財務会計制度を解説する。併せて、そのような財政構造を前提として存在する各種約束事(規制)の研究・開発業務における自主性・自律性に与える財政的影響とこれらの影響を取り除くための工夫について考えたい。また、公会計制度としての国立大学法人の財務会計制度における管理会計的要素の必要性とその具体的事例を提案し、この結果の大学マネジメントに与える影響とガバナンス機能の一部として必要な情報の共有化の必要性についても考えたい。

10月2日(日) 場所:3C

10:00-12:00 大学と経営

【講師】安西祐一郎氏(日本学術振興会理事長)

13:00-15:00 フィランソロピストから見た日本の大学

【講師】藤原洋氏(株式会社ブロードバンドタワー代表取締役会長兼社長 CEO、一般財団法人インターネット協会理事長、SBI 大学院大学副学長・教授、慶應義塾大学環境情報学部特別招聘教授、京都大学宇宙総合学研究ユニット特任教授、豊橋技術科学大学客員教授)

【概要】米 Forbes 誌が寄附金総額でのランキングを発表していますが、フィランソピーは、富の大小ではなく、利他的・奉仕的活動全般を指します。私と交流があるゴードン・ムーア氏(インテル)とビル・ゲイツ氏(マイクロソフト)は、自らの企業家としての体験から、大学における教育・研究が、社会発展の最大要因という共通認識を持ち大学に多大な支援を行ってきました。私自身も、これまで、企業家として、大学の教育・研究の支援をさせて頂いてきました。また、私は、最近、シカゴ大学、カリフォルニア大学サンディエゴ校、イスラエル国立工科大学の評価委員をさせて頂いていますが、これらの海外の私立、州立、国立の大学運営資金の調達内容と比較して、日本の大学予算は、文部科学省に極度に依存しており、財政面での差異が明らかです。本講義では、米国とイスラエルの3大学をケーススタディと日本の大学の資金調達の進むべき方向性についてお話ししたいと思います。

15:10-15:40 第2回プログラムの事前案内

※ 第1回 Jonathan Cole 氏の回にあたっては、必須ではありませんが、事前に以下の図書をご一読頂くと良いと思います。

Jonathan R. Cole., (2016) *Toward a More Perfect University*, Public Affairs.

III.研修内容の概要(第2回以降)

第2回国内プログラム:12月16日(金)~12月18日(日)

【研修内容】 第1日目は、カリフォルニア大学サンディエゴ校において米国の産学連携や技術移転を積極的に展開されている Mary Walshok 氏 (Associate Vice Chancellor for Public Programs and Dean of Extension at the University of California San Diego)をお招きした公開セミナーにご参加頂きます。第2日目、第3日目は、Mary Walshok 氏とともに米国の産学連携に関する動向についてディスカッションを通じて理解して頂くとともに、国内有識者より国内大学の産学連携に関する事例やデータを紹介し、我が国の今後の産学連携の在り方について議論を深めて頂きます。

【時間割】

12月16日(金)

14:00-17:40 地域イノベーションと大学の役割(公開セミナー)

14:00-14:30 上山隆大氏(内閣府総合科学技術・イノベーション会議常勤議員)による背景説明・講師紹介

14:30-16:00 Mary Walshok 氏 (Associate Vice Chancellor for Public Programs and Dean of Extension at the University of California San Diego)による講演

16:10-16:40 パネル報告者

16:40-17:40 パネルディスカッション

12月17日(土)

10:00-12:00 Mary Walshok 氏とのワークショップ

【講師】Mary Walshok 氏 (Associate Vice Chancellor for Public Programs and Dean of Extension at the University of California San Diego)

13:00-15:00 知的財産権論:大学における知的財産のマネジメント

【講師】渡部俊也氏(東京大学政策ビジョン研究センター教授)

【概要】知識を創出する大学にとっての重要な経営資産である知的財産は、米国における伝統的な技術移転マネジメントによる活用に加えて、企業との組織的連携などにおいてもその重要性は増している。本講義では、大学が知的財産をどのように生み出し、活用していくのかについての戦略とマネジメントについて、既往の考え方を学び、個別事例について議論する。

15:20-17:20 産学連携活動の見える化を通じたカイゼン活動の推進について

【講師】宮本岩男氏(資源エネルギー庁放射性廃棄物対策技術室長／広報室長)

【概要】平成 10 年に大学等における技術に関する研究成果の民間事業者への移転の促進に関する法律(TLO 法)が、平成 16 年に国立大学法人法がそれぞれ施行され、全国における産学連携体制の整備は大きく進展しました。これに伴い、大学等の企業との共同研究件数、特許出願件数、ライセンス件数等の「数」は大きく増加しましたが、1件当たりの共同研究費やライセンス収入は小規模に留まるなどの状況となっており、産学連携活動の「質」を高めていくことの必要性が産学の各方面で認識されつつあります。

一方、大学においては、国立大学法人化以降、研究・教育・社会貢献の各機能をこれまで以上に発揮していくことが求められてきており、平成 28 年度から始まる第 3 期中期目標期間においては、運営費交付金の中に学長裁量経費を新たに区分する等の改革が進められることとなっています。こうした中、大学が社会貢献としての産学連携機能をより強化していくためには、各大学が組織として目指す産学連携活動の目標を設定し、客観的かつ定量的な情報に基づいて自大学の強み・弱みや目標の達成状況を把握し、弱みを強みに変え、強みを伸ばすためのマネジメントを行うことが必要となっています。

自大学の強み・弱みを分析するに当たり、これまで客観的かつ定量的な情報によって自大学と他大学の状況を把握するための環境が存在しなかったことから、経済産業省においては文部科学省とともに、各大学の産学連携活動の特性やパフォーマンスを大学同士で比較可能な形で見える化し、産学連携評価指標データを提供した大学にその結果をフィードバックする取り組みを行ってきました。今後、このような情報が大学間で共有されることにより、大学の産学連携活動のマネジメントの一助となり、このような自主的な取り組みを行う大学が広がっていくことによって、各大学における産学連携機能が更に強化されていくことを強く期待します。

12 月 18 日(日)

10:00-12:00 産学連携マネジメント論

【講師】山本貴史氏(株式会社東京大学 TLO 代表取締役社長)

【概要】大学にとって産学連携活動の重要性は論を俟たない。産学連携による外部資金の導入は経済的にも大学の研究成果のアウトリーチの側面でも重要である。我が国の大学は、研究成果のレベルの高さに比して産学連携活動は、欧米の大学のそれと比較すると低迷していた。このような背景から、1998 年の

大学等技術移転促進法(TLO 法案)や2003年の大学知的財産本部整備事業、2004年の国立大学法人化と様々な施策が実施され産学連携の重要性は徐々に浸透していった。この20年で産学連携に関する大学を取り巻く環境は大きく変わり、それに伴い大学研究者の意識も大きく変化を遂げつつある。しかしながら、一方で産学連携活動という観点で見ると大学間格差は広がりつつある。この講義では、産学連携活動をより活性化させるには大学としてどのようなマネジメントが求められるかという観点で成功事例を踏まえて言及する。

13:00-15:00 国立大学の経営論(仮)

【講師】濱口道成氏(国立研究開発法人 科学技術振興機構理事長)

15:10-16:00 UCSD 研修プログラム参加者への事前案内

※ 第2回 Mary Walshok 氏の回にあたっては、必須ではありませんが、事前に以下の図書をご一読頂くと良いと思います。

Mary Walshok, Abraham Shragge., (2013). *Invention and Reinvention: The Evolution of San Diego's Innovation Economy*. Stanford Business Books.

※ 第2回の Mary Walshok 氏のワークショップの事前課題として、「別紙:UCSD 研修の海外プログラムトピックリスト」を参照した上で、各トピックについて質問リスト(英語)を11月18日(金)までに事務局(ttm-ml@grips.ac.jp)にご送付下さい。

海外プログラム(シンガポール国立大学における短期研修):1月24日(火)~1月26日(木) ※現地滞在期間 (定員有り)

【研修内容】 Times Higher Education のアジア大学ランキングで2016年に1位を獲得したシンガポール国立大学における短期研修プログラムにご参加頂きます。同大学の学長やプロボストとの対話セッションにご参加頂くとともに、シンガポール国立大学の国際化や研究マネジメントの取組みについて担当者から学んで頂きます。

海外プログラム(シカゴ大学における短期研修):1月24日(火)~1月27日(金) ※現地滞在期間 (定員有り)

【研修内容】 シカゴ大学における短期研修プログラムにご参加頂きます。同大学のプロボスト、ディーン、実務担当者等との対話セッションにご参加頂き、シカゴ大学の予算編成、研究マネジメント、寄付募集、国際化への取組み等について担当者から学んで頂きます。

第3回国内プログラム:2月25日(土)

【研修内容】 Times Higher Education のアジア大学ランキングで2016年に1位を獲得したシンガポール国立大学学長の Tan Chorh Chuan 氏をお招きした公開セミナーとクローズドなワークショップにご参加頂きます。

【時間割】

2月25日(土)

13:00-16:10 アジアにおける研究大学の展望(公開セミナー)

13:00-13:30 上山隆大氏(政策研究大学院大学客員教授、内閣府総合科学技術・イノベーション会議常勤議員)による背景説明・講師紹介

13:30-14:30 Tan Chorh Chuan 氏(シンガポール国立大学学長)による講演

14:40-16:10 鼎談:アジアにおける研究大学の展望(仮)

【モデレーター】上山隆大氏

【鼎談者】安西祐一郎(独立行政法人日本学術振興会理事長)

濱口道成(国立研究開発法人科学技術振興機構理事長)

Tan Chorh Chuan 氏(シンガポール国立大学学長)

16:40-18:10 Tan Chorh Chuan 学長とのワークショップ

【講師】Tan Chorh Chuan 氏(シンガポール国立大学学長)

海外プログラム(カリフォルニア大学サンディエゴ校研修):2月27日(月)~3月10日(金)

【研修内容】 公的資金の削減という環境下で先進的な大学経営を行っているカリフォルニア大学サンディエゴ校(UCSD)において、「公的資金が減少する中、如何に大学は教育研究活動を展開し、イノベーションを促進していくのか」をテーマに、UCSD の実際の取組みを担当者から学んで頂きます。

第4回国内プログラム+研修報告会:3月18日(土)~3月19日(日)

【研修内容】 第1日目は、国内有識者による講義を通じて、大学の教育研究評価の在り方や科学技術政策の動向について学んで頂きます。第2日目は、研修参加者のこれまでの経験や本研修プログラム(国内プログラム、海外プログラム)で得られた知見を踏まえ、大学の経営力強化に結びつく具体的方策の発表をして頂き、互いに議論を深めて頂くことを予定しております。

【時間割】

3月18日(土) 場所:1AB

10:00-12:00 教育研究活動の分析・評価

【講師】林隆之氏(大学改革支援・学位授与機構教授)

【概要】大学は外部からの評価を一つの契機にしつつも、自ら教育研究活動や成

果の分析をすすめ、戦略形成につなげていくことが求められています。本講義では、国内外(海外は主に英国を中心に)での事例を踏まえ、研究評価については科学技術イノベーション政策の変化に基づく研究評価の視点の変化や大学内の研究戦略・KPI 設定と分析について、教育評価についてはプログラムレビューを核とする有効性検証について説明します。また、教育研究活動のデータの分析をいかに行うかについて、日本で大学評価を通じて活用可能となっている教育研究データなどのデータインフラの状況やデータ分析の視点について説明します。

13:00-15:00 転換期における科学技術:政策・制度・人

【講師】有本建男氏(政策研究大学院大学教授)

【概要】21世紀の現在、世界システムは歴史的な転換期を迎えている。その中で、19世初めから築かれてきた近代科学技術の価値、制度、体制、行動規範などが、情報通信革命による科学技術の方法の急速な変容と、地球規模課題への対応、社会経済のグローバル化を背景に、大きな変革を迫られている。本講では、こうした視点から、21世紀の科学技術のあり方について、幾つかの課題と展望を紹介し議論を深めたい。

15:20-17:20 大学マネジメント論(仮)

【講師】上山隆大氏(内閣府総合科学技術・イノベーション会議常勤議員)

3月19日(日) 研修報告会 場所:1AB

10:00-10:30 海外研修の情報共有:シカゴ大学海外研修プログラム

10:30-11:00 海外研修の情報共有:シンガポール国立大学海外研修プログラム

11:00-12:00 海外研修の情報共有:UCSD 海外研修プログラム

13:00-15:00 研修全体を通じた感想の共有

※お一人 4 分程度で本研修全体を通じて特に印象に残った点や、ご所属の大学の経営力強化に結びつけていくためのお考え等をお話頂ければ幸いです。
(簡単で結構ですので A4 用紙1枚程度(箇条書きでも結構です)にお考えをまとめて頂き、3月14日までに事務局(ttm-ml@grips.ac.jp)までご送付頂ければ幸いです。頂いた資料は、当日全体で共有をさせて頂く予定です)。

15:00-15:30 写真撮影・アンケート

(参考)海外招へい講師略歴

第1回 Jonathan R. Cole 氏 (米コロンビア大学 John Mitchell Mason Professor)

Jonathan R. Cole is the John Mitchell Mason Professor of the University at Columbia University. He served as its Provost from 1989 to 2003, after being its Vice President of

Arts and Sciences. His work has focused principally on the sociology of science and knowledge and on features of higher education. He has published widely in these research areas and lectured on them around the world. He is an elected member of the American Academy of Arts and Sciences, the American Philosophical Society, the Council on Foreign Relations, and an associate member of the National Academies of Sciences. He has and still serves on many non-profit Boards, most recently as a member of the Board of Trustees of the Central European University.

(詳細: <http://www.nus.edu.sg/president/biography.html>)

第2回 Mary Lindenstien Walshok 氏 (米カリフォルニア大学サンディエゴ校(UCSD)パブリック・プログラム副理事、エクステンション部門長)

Mary Lindenstien Walshok is an author, educator, researcher, and Associate Vice Chancellor for Public Programs and Dean of Extension at the University of California San Diego. She is a thought leader and subject matter expert on aligning workforce development with regional economic growth.

As head of the continuing education and public programs arm of UC San Diego since 1981, Walshok oversees programs that educate more than 61,000 enrollees annually, which translates to more than 25,000 students in over 4,400 courses. She oversees a staff of 230 employees and an annual budget of more than \$50 million. Walshok has developed outreach efforts to help accelerate the San Diego region's economic vitality, assure a globally competitive talent pool and help college graduates transition to employment areas that are in higher demand.

(詳細: <http://extension.ucsd.edu/about/index.cfm?vAction=managementProfiles>)

第3回 Tan Chorh Chuan 氏 (シンガポール国立大学学長)

Tan Chorh Chuan was appointed president of the National University of Singapore in December 2008. He concurrently serves as the chairman of the Board of the National University Health System. Tan's additional appointments include deputy chairman of Singapore's Agency for Science, Technology and Research; senior advisor to the Governing Board of Duke-NUS Graduate Medical School; member, board of directors of the Monetary Authority of Singapore; and member, board of directors of Mandai Safari Park Holdings. He was dean of the NUS Faculty of Medicine, and director of Medical Services in the Ministry of Health, in which capacity he was responsible for leading the public health response to the 2003 SARS epidemic. He held the positions of NUS provost, senior deputy president. As the inaugural chief executive of the National University Health System in 2008, he brought the

NUS Medical and Dental Schools and the National University Hospital under single governance.

(詳細: <http://www.nus.edu.sg/president/biography.html>)

IV. 研修参加にあたって

- ※ 本研修は、研修参加者同士の経験を共有し、議論を深める場を積極的に設けたいと考えております。そのため、公開セミナー、国内プログラムにおいては、パネリストとして共有可能な範囲でご所属の大学の事例等をご紹介頂くことをお願いすることがありますが、何卒ご協力頂くようお願い申し上げます。
- ※ 日程・内容等は、やむを得ない事情により変更となる場合があります。
- ※ 当日やむを得ず欠席あるいは遅刻される際は、セミナー開始前にVIIIのお問い合わせ先までご連絡ください。
- ※ 国内プログラムではパソコンは使用しませんが、必要な場合は、ご自身のパソコンをご持参ください。
- ※ 宿泊費、交通費、食費(ランチ、懇親会含む)は個人負担となりますことをご了承ください。宿泊施設はご自身でご手配ください。

6.2 シンガポール国立大学研修プログラム

Programme schedule

Tuesday, 24 January

- 10:30am **President's Dialogue: University Governance and Global Talent Management**
Professor Tan Chorh Chuan, NUS President
With the increasing globalized nature of higher education today, this session will frame broad issues on university governance and share NUS' experience in its institutional transformation.
- 12:30pm *Lunch and Group Photo*
- 2:00pm **Panel Session: Academic and Administrative Management in a Global University**
Professor Tan Eng Chye, Deputy President and Provost
Mr Don Yeo, Deputy President (Administration)
This session is designed to be an in-depth panel discussion with NUS Provost and Deputy President (Administration) on issues related to attracting and developing top academic personnel, and administrative management of a large global university.
- 4:00pm *Refreshment break*
- 4:30pm **Tour of University Town**
Designed for the entire NUS community, University Town, or UTown for short, is an educational hub complete with residential spaces, teaching facilities and study clusters, UTown has created a lively intellectual, social and cultural environment that distinguishes the University through excellence in learning and student engagement.
- 6:30pm **Welcome Dinner hosted by NUS Provost**
University Club, Shaw Foundation Alumni House, NUS
- 8:30pm *End of Day 1*

Wednesday, 25 January

- 9:15am **Internationalisation and Institutional Partnerships**
Professor Andrew Wee, Vice President (University and Global Relations)
In keeping up with the trends of internationalisation, this session will provide NUS' experience and examples in internationalisation across various student mobility and research collaborations. Large scale institutional partnerships, like the Duke-NUS Medical School, will also be showcased.
- 11:00am **Duke-NUS Medical School Overview and Tour**
- 12:30pm *Lunch with staff and students from Duke-NUS Medical School*
- 2:30pm **Preparing Future-ready Graduates**
Ms Crystal Lim Leahy, Director, Centre for Future-ready Graduates

Employability of university graduates is a key concern in an increasingly globalized and competitive world. This session aims to demonstrate NUS' efforts in preparing graduates to be future-ready, via career preparation and experiential learning.

4:00pm *End of Day 2*

Thursday, 26 January

- 9:15am **Research Management and Benchmarking**
Professor Philip Liu, Vice President (Research and Technology)
To be a leading research intensive university requires excellent research management and benchmarking against top research universities of the world. This session will share NUS' experience in this area and an overview of the University's integrated and multi-disciplinary nature of research.
- 10:30am **Visit to Sembcorp-NUS Corporate Lab**
A visit to an NUS Corporate Lab will showcase a model of how industry and academia can collaborate.
- 12:00pm **Entrepreneurship in academia: Collaborations with government and industry**
Professor Wong Poh Kam, Director, NUS Entrepreneurship Centre
This session shows how NUS Enterprise was set to augment and complement the University's academic programmes and nurture talents to possess an entrepreneurial and global mind-set, through experiential entrepreneurial education, active industry partnerships, comprehensive entrepreneurship support, catalytic entrepreneurship outreach, and being the bridge to industry for the University.
- 1:15pm **Tour of The Hangar (Start-up facility) and lunch**
- 3:00pm **Campus Planning and Infrastructure Development**
Professor Yong Kwet Yew, Vice President (Campus Infrastructure)
This session will give an overview of NUS' experience in long term capital planning and precinct master planning.
- 4:15pm *Refreshment Break*
- 4:30pm **Curriculum design and management**
Professor Bernard Tan, Vice-Provost (Undergraduate Education and Student Life)
The world is in the midst of an education revolution. Curriculum has to be designed so that learners are actively engaged in study and practice, integrated with other learners and supported in developing the confidence and motivation needed to master difficult material. This session will highlight NUS' efforts in designing our curriculum to achieve that, with the aid of technology.
- 5:45pm *End of programme*

END

6.3 カリフォルニア大学サンディエゴ校研修プログラム

University Management Seminar Program Agenda

WEEK 1

Monday, February 27, 2017

Start Time	Finish Time	Activity	Speaker
9:00 AM	9:30 AM	Welcome & Introductions	Mary Walshok , Associate Vice Chancellor for Public Programs and Dean, University Extension
9:30 AM	10:00 AM	Program Registration – PASSPORTS REQUIRED	
10:00 AM	11:00 AM	Program Overview	
11:00 AM	12:00 PM	Historical Overview of the UC System <ul style="list-style-type: none"> • California Master Plan for Education 	Mary Walshok , Associate Vice Chancellor for Public Programs and Dean, University Extension Henry Powell, MD , Professor of Pathology; Past Chair, University of California Academic Council; Past Chair, UC San Diego Academic Senate
12:00 PM	1:30 PM	Lunch	
1:30 PM	3:00 PM	Governance: UC Regents & UCOP <ul style="list-style-type: none"> • Overview & Structure • Relation to State Government & Constitutional Autonomy • Roles & Responsibilities (policy setting, tuition/fees) 	Henry Powell, MD , Professor of Pathology; Past Chair, University of California Academic Council; Past Chair, UC San Diego Academic Senate (TBC) Kieran Flaherty, Deputy to the CFO, State Budget Relations; Interim Director, State Government Relations, University of California, Office of the President
3:00 PM	3:15 PM	Coffee Break	
3:15 PM	4:45 PM	The Changing Context for the UC System <ul style="list-style-type: none"> • State budget crises • Shifting Demographics • Declining/Flat Federal R&D Budgets • Increased Cost of Benefits for Employees 	Kieran Flaherty, Deputy to the CFO, State Budget Relations; Interim Director, State Government Relations, University of California, Office of the President
6:30 PM	8:30 PM	Welcome Dinner	UC San Diego Faculty Club, Seuss Library

Tuesday, February 28

Start Time	Finish Time	Activity	Speaker
9:00 AM	10:00 AM	UCSD Administrative Structure: Overview & Senior Management	Mary Walshok , Associate Vice Chancellor for Public Programs and Dean, University Extension
10:00 AM	11:00 AM	Role of the Executive Vice Chancellor and Deans at UC San Diego	Peter Cowhey , Interim Executive Vice Chancellor for Academic Affairs; Dean, School of Global Policy & Strategy; Qualcomm Endowed Chair in Communications and Technology Policy
11:00 AM	12:00 PM	Faculty Governance at the Campus and UC levels <ul style="list-style-type: none"> Academic Senate (campus) Academic Council (UC system) 	Henry Powell, MD , Professor of Pathology; Past Chair, University of California Academic Council; Past Chair, UC San Diego Academic Senate
12:00 PM	1:30 PM	Lunch	
1:30 PM	2:30 PM	Financial Management - Overview	Pierre Ouillet, Vice Chancellor and Chief Financial Officer
2:30 PM	4:30 PM	Time for Personal Schedules	

Wednesday, March 1

Start Time	Finish Time	Activity	Speaker
9:00 AM	10:00 AM	Financial Management – Balanced Scorecard Approach	Bob Neuhard , Executive Director, Office of Strategic Initiatives Angela Song , Senior Director, Organizational Assessments and Strategy, Office of Strategic Initiatives
10:00 AM	11:00 AM	Long Term Strategic Planning <ul style="list-style-type: none"> Adapting to Changing Conditions Revenue Generation/Diversification 	Bob Neuhard , Executive Director, Office of Strategic Initiatives Angela Song , Senior Director, Organizational Assessments and Strategy, Office of Strategic Initiatives
11:00 AM	12:00 PM	Long Term Strategic Planning <ul style="list-style-type: none"> Implementation 	Bob Neuhard , Executive Director, Office of Strategic Initiatives Angela Song , Senior Director, Organizational Assessments and Strategy, Office of Strategic Initiatives
12:00 PM	1:30 PM	Lunch	
1:30 PM	3:00 PM	Long Term Strategic Planning <ul style="list-style-type: none"> Developing SMART Metrics Participant exercise 	Bob Neuhard , Executive Director, Office of Strategic Initiatives Angela Song , Senior Director, Organizational Assessments and

			Strategy, Office of Strategic Initiatives
3:00 PM	3:30 PM	Coffee Break	
3:30 PM	4:30 PM	Overview of Science Policy in the U.S.	Nathan Owens , Director, Global CONNECT, UC San Diego Extension

Thursday, March 2

Start Time	Finish Time	Activity	Speaker
9:00 AM	10:00 AM	Research at UCSD: Office of Research Affairs <ul style="list-style-type: none"> • Overview • Strategic Research Initiatives 	Sandra Brown, Vice Chancellor for Research
10:00 AM	11:00 AM	Research Policies: Compliance, Contracting, etc.	Linda Collins, Assistant Vice Chancellor and Director, Office of Contract and Grant Administration
11:00 AM	12:00 PM	Multidisciplinary Research	Miroslav Krstic , Associate Vice Chancellor for Research
12:00 PM	1:30 PM	Lunch Hosted by UC San Diego's Office of Research Affairs <ul style="list-style-type: none"> • Dugout Conference Room 	
1:30 PM	2:30 PM	International Outreach <ul style="list-style-type: none"> • International research collaborations with industry 	Miwako Waga, Director, International Outreach, Office of Research Affairs
2:30 PM	3:00 PM	Research Administration Training Program	Nicole Joyce, Research Administration Training Program Manager
3:00 PM	3:30 PM	Coffee Break	
3:30 PM	4:30 PM	Incubator/Accelerator: StartR/mystartupXX	Lada Rasochova , Executive Director, California Institute for Innovation & Development, Rady School of Management

Friday, March 3

Start Time	Finish Time	Activity	Speaker
9:00 AM	10:00 AM	Research Policies: Conflict of Interest	Angela McMahon, Executive Director, Research Compliance and Integrity, Office of Research Affairs
10:30 AM	12:00 PM	Faculty Hiring, Retention, & Evaluation	Peter Gourevitch , Founding Dean of the School of Global Policy & Strategy; Distinguished Professor Emeritus
12:00 PM	1:30 PM	Lunch	
1:30 PM	3:00 PM	Academic Facilities, Resources, & Support Services <ul style="list-style-type: none"> • Critical infrastructure to support education and research • Financing of facilities in a budget-constrained environment 	Stephen Jackson, Director of Facilities Management Mercedes Munoz , Executive Director of Financial and Budget Management
3:00 PM	3:30 PM	Coffee Break	
3:30 PM	4:30 PM	Financing of Undergraduate Education <ul style="list-style-type: none"> • Scholarships and Financial Aid 	Vonda Garcia, Director of Financial Aid

4:30 PM	5:00 PM	Week 1 Debrief	
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WEEK 2

Monday, March 6

Start Time	Finish Time	Activity	Speaker
9:00 AM	11:00 AM	Failed Initiatives and Lessons Learned <ul style="list-style-type: none"> School of Architecture Law School 	Richard Attiyeh, former Vice Chancellor for Research and Dean of Graduate Studies Paul Drake , Distinguished Professor Emeritus, former Senior Vice Chancellor for Academic Affairs Mary Walshok , Associate Vice Chancellor for Public Programs and Dean, University Extension
11:00 AM	12:00 PM	Overview of Innovation and Commercialization at UCSD	Paul Roben, Associate Vice Chancellor for Innovation and Commercialization
12:00 PM	1:30 PM	Lunch	
1:30 PM	3:00 PM	Technology Transfer Issues <ul style="list-style-type: none"> Patents, Licensing, MTAs, etc. 	Rubén Flores , Director of Commercialization
3:00 PM	3:30 PM	Coffee Break and walk to Calit2/Qualcomm Institute	
3:30 PM	5:00 PM	Calit2/Qualcomm Institute Visit	Hon. Lynn Schenk, former Chief of Staff to California Governor Gray Davis; Member, US House of Representatives (1992-1994)

Tuesday, March 7

Start Time	Finish Time	Activity	Speaker
9:00 AM	10:00 AM	Case Study: Rady School Of Management <ul style="list-style-type: none"> How the School was Planned & Launched 	Clark Jordan, Assistant Dean, Rady School of Management
10:00 AM	11:00 AM	University Ranking Systems	Jeffrey Gattas, Executive Director of Marketing, Media Relations, and Public Affairs
11:00 AM	12:00 PM	Alumni Relations	Sean Burns, Director of Global Engagement and Advancement, Alumni Department Marilyn Li, Associate Director, Alumni Outreach – Asia, Alumni Department
12:00 PM	1:30 PM	Lunch	
1:30 PM	4:30 PM	Time for Personal Schedules	

Wednesday, March 8

Start Time	Finish Time	Activity	Speaker
9:00 AM	10:00 AM	Overview of UC San Diego Health Sciences	David Brenner , Vice Chancellor for Health Sciences; Dean, School of Medicine
10:00 AM	11:00 AM	UC San Diego Health Sciences: <ul style="list-style-type: none"> The School of Medicine 	Maria Savoia , MD, Dean for Medical Education, School of Medicine
11:00 AM	12:00 PM	UC San Diego Health Sciences: <ul style="list-style-type: none"> Skaggs School of Pharmacy & Pharmaceutical Sciences 	James Colbert , Associate Dean for Experiential Education, Skaggs School of Pharmacy & Pharmaceutical Sciences
12:00 PM	1:30 PM	Lunch	
1:30 PM	2:15 PM	Overview of the Jacobs School of Engineering	Al Pisano, Dean, Jacobs School of Engineering
2:15 PM	3:00 PM	Development and Alumni Relations at the Jacobs School of Engineering	William Burfitt, Executive Director of Development, Jacobs School of Engineering
3:00 PM	3:45 PM	Business Development at the Jacobs School of Engineering	Jan Dehesh, Director of Business Development, Jacobs School of Engineering
3:45 PM	4:30 PM	Corporate Affiliates Program at the Jacobs School of Engineering	Anne O'Donnell, Executive Director for Corporate Research Partnerships, Jacobs School of Engineering

Thursday, March 9

Start Time	Finish Time	Activity	Speaker
9:00 AM	10:00 AM	Federal Government Research Relations *SESSION CANCELLED DUE TO SPEAKER ILLNESS*	Angela Phillips Diaz, Executive Director, Government Research Relations
10:00 AM	12:00 PM	Case Study: Institute for the Global Entrepreneur (IGE) <ul style="list-style-type: none"> Joint Initiative between the Rady School and the Jacobs School Commercialization assistance programs such as NSF I-Corps, proof-of-concept grants, Triton Fund 	Lori Deaton, Program Manager, IGE Albert Liu, Business Advisor and I-Corps Mentor, IGE
12:00 PM	1:30 PM	Lunch	
1:30 PM	3:00 PM	Financial Management <ul style="list-style-type: none"> Budgeting Financial Modeling Compliance 	Sylvia Lepe-Askari, Assistant Vice Chancellor, Campus Budget Office
3:00 PM	3:30 PM	Break and walk to San Diego Supercomputer Center	
3:30 PM	4:45 PM	San Diego Supercomputer Center Visit	Shawn Strande, Deputy Director, San Diego Supercomputer Center

Friday, March 10

Start Time	Finish Time	Activity	Speaker
9:00 AM	10:00 AM	Community Engagement	Mary Walshok , Associate Vice Chancellor for Public Programs and Dean, University Extension
10:00 AM	11:00 AM	Philanthropic Giving: <ul style="list-style-type: none"> • Tax Benefits of Giving • Use of Funds – Research, Endowed Chairs • Scholarships, Naming Rights, etc. 	Marlene Shaver , CFO, UC San Diego Foundation
11:00 AM	12:00 PM	Friends & Community Supporters <ul style="list-style-type: none"> • Chancellor’s Associates, Board of Overseers, Foundation 	Carol Chang , Chair, Board of Trustees, UC San Diego Foundation
12:00 PM	1:30 PM	Lunch	
1:30 PM	3:00 PM	Program Wrap-Up and Debrief	Mary Walshok , Associate Vice Chancellor for Public Programs and Dean, University Extension
6:30 PM	8:30 PM	Farewell Dinner	Estancia Hotel, Trinitas Cellars Private Dining Room

6.4 平成28年度大学トップマネジメント研修募集要項

文部科学省「イノベーション経営人材育成システム構築事業」

大学トップマネジメント研修

募集要項

2016年7月12日

政策研究大学院大学

科学技術イノベーション政策研究センター

1. 趣旨

本研修は、我が国の大学が有する知的資産の活用によるイノベーション創出に向けて、多様な学問領域から構成される複雑な大学組織全体をマネジメントすることのできる経営人材を育成するものです。

2. 育成される人材のイメージ

諸外国の先進的な大学マネジメントの在り方や我が国の大学組織の特性に深い見識を有し、学内外の多様なステークホルダーを巻き込みつつ、大学の経営戦略・財務戦略の策定、産学連携のマネジメント、知的財産の適切な管理等を効果的に実施し、大学の経営力を強化することのできる次世代の大学幹部

3. 研修内容

本研修は、「A. 国内プログラム」と「B. 海外プログラム」より構成されています。

研修参加者は、これらのプログラムを通じて、大学経営人材として必要な知識や知見を身につけるとともに、自身の経験と問題意識に基づいた大学の経営・マネジメント上の課題について発表・討議を行い、大学の経営力強化に結びつく具体的方策を検討することが求められます。

A. 国内プログラム

国内の学長経験者、産業界関係者及び有識者による講義、海外から招へいするユニバーシティ・リーダーズとのワークショップ等を通じて、大学の戦略的なマネジメントを遂行する際に必要な基礎的な知識（大学の経営戦略論、財務会計論、産学連携マネジメント論、知的財産権論、教育研究評価論等）を提供するとともに、参加者の問題意識や経験を共有するための機会を提供します。

<国内プログラム予定講師（敬称略）>

- ・ Jonathan Cole (John Mitchell Mason Professor of the University Provost and Dean of the Faculties, Emeritus)
- ・ Mary Walshok (Associate Vice Chancellor for Public Programs and Dean of Extension at the University of California San Diego)
- ・ 安西祐一郎（日本学術振興会理事長、中央教育審議会会長、元慶應義塾長）
- ・ 上山隆大（内閣府総合科学技術・イノベーション会議常勤議員）

- ・ 濱口道成（国立研究開発法人科学技術振興機構理事長、元名古屋大学総長）
- ・ 山本貴史（株式会社東京大学 TLO 代表取締役社長）他。

※ 講師は変更の可能性があります。

B. 海外プログラム

カリフォルニア大学サンディエゴ校研修

公的資金の削減という環境下で先進的な大学経営を行っているカリフォルニア大学サンディエゴ校（UCSD）において、「公的資金が減少する中、如何に大学は教育研究活動を展開し、イノベーションを促進していくのか」をテーマに、UCSD の実際の取組みを担当者から学ぶ 10 日間程度の海外研修プログラムを実施します。米国のトップ研究大学の現場で大学マネジメントを学び、現地の大学関係者とネットワークを構築する機会を提供します。

<UCSD 研修で扱うテーマ例>

- ・ UCSD の戦略計画・財務戦略、産学連携と技術移転、寄付募集戦略等

※内容は変更の可能性があります。

この他、研修参加者の一部を対象として、米国の研究大学のプロボストオフィスの会議等にオブザーバーとして参加し、実際の大学経営の現場を経験する短期インターンシッププログラムを実施する予定です。（詳細は調整中）

4. 研修日程（予定）

- ・ 第 1 回国内プログラム集中講義 場所：政策研究大学院大学（六本木）
2016 年 9 月 30 日（金）15 時 00 分～17 時 30 分
2016 年 10 月 1 日（土）9 時 00 分～17 時 30 分
2016 年 10 月 2 日（日）10 時 00 分～15 時 00 分
- ・ 第 2 回国内プログラム集中講義 場所：政策研究大学院大学（六本木）
2016 年 12 月 16 日（金）15 時 00 分～17 時 30 分
2016 年 12 月 17 日（土）9 時 00 分～17 時 30 分
2016 年 12 月 18 日（日）10 時 00 分～15 時 00 分
- ・ 第 3 回国内プログラム集中講義 場所：政策研究大学院大学（六本木）
2017 年 2 月下旬を予定
- ・ 海外プログラム 場所：カリフォルニア大学サンディエゴ校
2017 年 2 月 27 日～3 月 10 日
- ・ 第 4 回国内プログラム（発表・報告会）：政策研究大学院大学（六本木）
2017 年 3 月下旬を予定

※この他、海外大学への短期インターンシッププログラムを一部参加者に実施予定

5. 募集人数・研修期間

30名程度、1年間

※審査基準に満たない場合、募集人数に達しない場合がございます。

※※海外プログラムについては、受入相手先の事情により、国内プログラム参加者の中から参加者を選定する可能性があります。

6. 応募条件

- ・ 所属大学の学長の推薦を受けた者とし、組織としての応募であること
- ・ 参加者本人が大学経営の中核を担う人材としてのキャリアを強く意識していること
- ・ 所属大学も被推薦者が将来大学の要職に就くことを期待し、本プログラムに参加することを組織として最大限支援（学内委員会等用務の免除・軽減、教育研究業務履行のための人的支援、研修修了後の人事計画等）すること

7. 費用負担

原則、プログラム参加者の国内外の移動・滞在等に必要な旅費・宿泊費等の経費は、プログラムの参加者の所属大学に負担して頂きます。

8. 提出書類、提出方法

提出書類：

- ①参加申請書【様式1】
- ②申請者情報及び教育研究業績書【様式2】
- ③志望理由書【様式3】
- ④所属大学の学長による推薦状【様式4】

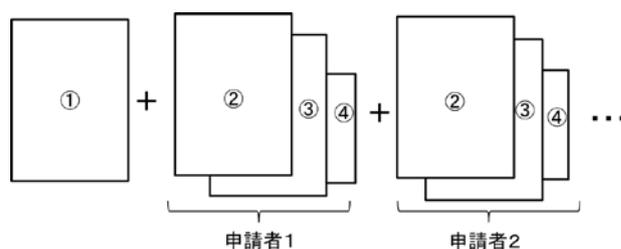
提出方法：

提出期限までに、紙媒体及び電子媒体を提出すること。

<紙媒体（郵送にて提出）>

提出にあたっての注意事項：

- 1) 複数名申請する場合は、提出書類②～④は申請者毎に作成ください。
提出の際は、①を一番上にして、①の名簿順に②～④をまとめてご提出ください（下図参照）。



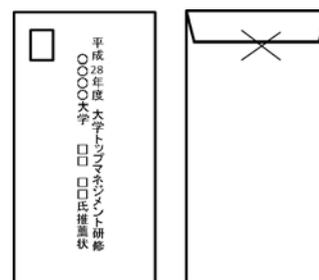
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9. 募集・選考日程等

応募期間：公募開始日～2016年8月5日（金）

選考：2016年8月中旬～9月上旬予定

※必要に応じ8月29日の週に都内にて面談を実施する場合がございます

結果通知：2016年9月上旬予定 ※選考結果に関する個別の照会にはお答えしません。

10. 審査基準

- 1) 申請者本人が大学のマネジメントに携わった経験があり、かつ、大学の経営・マネジメントについて、具体的な問題意識を有していること
- 2) 大学経営人材としての具体的なキャリアプランを有していること
- 3) 研修修了後に、学内での研修やセミナー等で成果を発表するなど、本研修で得た成果を活用する具体的な計画を有していること

- 4) 大学として、研修参加者に対し、研修修了後の大学経営人材としての具体的なキャリアイメージを有していること

11. その他

- ・ 研修期間は1年間です。次年度は別途新規に参加者を募集いたします。
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12. お問い合わせ先

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6.5 カリフォルニア大学サンディエゴ校研修報告資料

Report of the University Management Seminar

February 27 – March 10, 2017

University of California, San Diego

Provided by: The University of California, San Diego UCSD Extension

1 Objectives of the Seminar

The executive training seminar was focused on public research university management and finance issues in the context of reduced public funding. It provided participants with insight into models and best practices currently in place at the University of California, San Diego campus, one of ten in the UC system. UC San Diego, is one of the top research universities in the United States. It has a \$4.5 billion total budget, 35,000 student enrollments as of Fall 2016 and over 1,200 faculty. Financially, the university has gone through a series of reductions in funding from the State of California over the years. Special attention in this program was given to strategic planning, budget operations, and research-related issues. Senior management, faculty, and staff from UC San Diego delivered the lectures covering various academic, business, research affairs, and student service divisions of the university. The aim was to provide participants from Japanese public universities with some important lessons learned and possible models for adapting to budget cuts in operational funding from the Japanese government.

2 Program Details

A list of participants is included in the Appendix (Section 4). The program agenda, lecturer biographies, and presentation materials are enclosed as attachments.

3 Session Summary

3.1 Session 1: Historical Overview of the University of California System

The opening session of the program provided participants with the foundations of the University of California and its development over time, thereby providing context for how the system's unique features came about and influence the present day. Just as the Gold Rush began in 1848, a missionary, Samuel Hopkins Willey, arrived in California and later founded the Contra Costa Academy in Oakland in 1853. The Academy, later renamed the College of California, was focused on providing a liberal arts education in the rapidly expanding state. In 1866, the College merged with the Agricultural, Mining, and Mechanical Arts College. This evolved in the first University of California (UC) campus when the university was chartered by the state in 1868 and then later moved to Berkeley five years later. The new university faced a tension between providing a classical liberal arts education versus the demands of many citizens who wanted practical training in agriculture, soil science, and mechanical arts. Eventually a balance

was achieved, but interference by the state legislature later drove the first UC President, Daniel Coit Gilman, to resign. His criticism led to the system's constitutional autonomy, eventually enacted in 1879, that forms the basis of its governance structure. From then on, the UC system grew organically, adding capabilities and locations over time. Following the end of World War II, the UC system shifted emphasis away from agriculture towards manufacturing-related disciplines, and then later towards knowledge-based disciplines. By the 1960s, then UC President Clark Kerr championed the Master Plan for Higher Education. This placed the UC system as the top public university in the state, focusing it on research and providing professional degrees, while accepting the top high school students. The California State University system took the next tier of students, and emphasized more practical education. The community colleges filled the next tier. The Master Plan proved to be wildly successful in setting the state's strategy for higher education in the following decades. The UC system, currently with 10 campuses, became the premier public university system in the U.S. and an engine for talent development and economic growth for California.

3.2 Session 2: Governance: The UC Regents and UC Office of the President (UCOP)

This session provided a description of the governance structure of the UC system, and the roles and responsibilities of the key entities involved – The Regents, the Assembly of the Academic Senate, the Office of the President (UCOP), the governor, and the state legislature. The UC system is guided by its mission to provide research, teaching, and public service. To achieve that, the system uses a shared governance model made up of the board of Regents, the voice of the faculty through the Assembly of the Academic Senate, and the executive leadership of the university via UCOP. The system is unique in that it was granted constitutional autonomy from the legislature in 1879. While independent in many ways, there are several exceptions. The legislature also has leverage in that it provides funding. The Regents, however, set tuition rates. The Regents are comprised of 26 members, of which 18 are appointed by the governor for 12-year terms, plus two non-voting faculty representatives. The remaining members are ex-officio, and include the governor, speaker of the state assembly, and the UC president among others. The two faculty representatives are there to speak on behalf of the academics and provide information to the Regents based on faculty experience. The Academic Council, part of the Assembly of the Academic Senate, works with the Regents in key areas, such as setting admissions policies, faculty welfare, etc. UCOP's function is to oversee the fiscal and business operations of the stem, provide academic and research support to the campuses, and oversee the five public medical centers in

the system. Following the overview of the governance structure, the session turned to the operating budget and the changes following the 2008 economic crises which led to the state significantly reducing its financial support to the UC system. The state now only contributes about 10% over the overall UC system budget. Among the changes was the UC system taking on bond issuances for capital projects since it has a better credit rating than the state, and a rapid increase to non-resident enrollments as those students are charged full tuition. Non-resident students now comprise approximately 16% of the population across the system, although it varies by campus.

3.3 Session 3: The Changing Context for the UC System

The UC system faces multiple challenges to achieve its mission and principles of quality, access, and affordability, given the changing financial and demographic environment it operates in. While state funding as an absolute amount has tripled since the early 1980s, that support has been increasingly volatile from year to year due to bigger macroeconomic conditions as well as constraints placed on how the state spends its general fund. Over that same time period, enrollment in the UC system has doubled, but the UC system's share of the state's general fund has declined from near 6% to a little more than 2%. Variations in the state's income tax revenue combined with voter-approved ballot measures, such as Propositions 13 (limits on property taxes) and 98 (guaranteed minimum funding for K-14 education) led to reductions in what the state provides to the UC system. This forced the UC system to increase tuition during four periods since 1990. Revenue from tuition and fees surpassed funding from the state for the first time in 2011-2012. Other sources of financial pressure are the cost increases associated with employee retirement and health benefits, student enrollment growth and financial aid commitments, and the traditional cost drivers of inflation and capital outlays. The UC system therefore is seeing revenue in terms of state support decline, while its costs of operating are increasing. The state's social demographics are also shifting. The UC system is still committed to the principles of social mobility and access to higher education. However, it has seen the number of students who are the first in their family go to college double since 2002, the number of low-income students have increased (thereby increasing the need for financial aid by \$1 billion), and the number of students from under-represented minority groups have also doubled since 2002. In addition to tuition increases, UC has responded by enrolling more non-resident students who pay higher tuition rates and are not eligible for state financial aid programs. This has become a political issue, with the state now wanted UC to limit the number of non-residents it enrolls to ensure space for California resident students. In

fact, some legislators would like to see UC reduce its research and put more money into supporting student enrollment.

3.4 UC San Diego Administrative Structure: Overview & Senior Management

As a prelude to reviewing the organization of UCSD's administration, Dr. Walshok provided a brief history of how San Diego and UCSD developed. San Diego's growth as a city was affected by its geography, which constrained where development and what kinds of industry could take place, and the values of its early settlers. Many came for the clean environment and health benefits. Since there were no large industrial conglomerates, it was often small business leaders who championed economic development initiatives in the hopes of raising the city's profile. The Panama-California Exhibition in 1915, which created Balboa Park, is a prime example. However, the US military had a larger impact on San Diego's development, with the location of major naval facilities here around the turn of the 20th Century, then rapidly expanding during the Second World War, and then continuing through the Cold War. This led to an engineering culture, which became a prime factor in the birth of UC San Diego, an institution that was initially envisioned to focus on science and engineering disciplines. The remainder of the session was devoted to describing UCSD's administrative structure using organization charts for various units. These include the overall structure for Vice Chancellors who report to the Chancellor, the Chancellor's Office, Academic Affairs, the CFO's office, Health Sciences, the Office of Research Affairs, and Advancement. The Chancellor's Cabinet was also discussed. The Cabinet is made up of the senior leadership, which meets once a week to discuss important issues.

3.5 Role of the Executive Vice Chancellor (EVC) at UC San Diego

Interim Executive Vice Chancellor (IEVC) Peter Cowhey began the interview-style session by discussing the relationship of UCSD with the Regents, UCOP, and the state legislature. The UC system is highly decentralized, with each campus being independent in many areas. UCOP provides guidance on some policies. The state legislature provides funding, but that funding comprises less than 10% of UCSD's overall budget. The Regents set tuition pricing and can place limits on enrollment patterns. This environment creates challenges for UCSD because it must compete against other public and private universities to get the best students while still provide high quality education. IEVC Cowhey then turned to describing his position, which is the second highest after the Chancellor. UCSD has a relatively few senior management

positions, but each has a large number of direct reports. Among those that report to the EVC are the Deans and Vice Chancellors of education, student affairs, and research. One of his job functions is to work closely with the Chancellor to ensure that the research and education missions of the university are integrated, while translating into public service. He has to think about where research and teaching are headed in the future and prepare the university to be ahead of the curve. He also has to consider how to sustainably accommodate an increasing student population, along with the corresponding growth in faculty, and maintain the principles of diversity and inclusion in regards to women and minorities. IEVC Cowhey then turned to discussing shared governance with the faculty via the academic senate, with which he and the Chancellor are in frequent contact with. He provided an example of faculty hiring and discussed the process which involves the Committee on Academic Personnel. Lastly, he noted that he and the Chancellor have increasingly been decentralizing budget control to allow the deans to have more discretion on spending to hire new professors. He included a recent example in which a promising new professor was given a joint appointment in two academic units given the cross disciplinary and cutting edge nature of her work in geoen지니어ing. The units share the cost of her salary and jointly conduct her performance evaluations.

3.6 Faculty Governance at the Campus and UC Levels

The structure of faculty governance in the UC system has developed over time based on cultural history and traditions, starting with the systems charter in 1868. It was important to give the system a unified voice for the faculty, rather than having each campus approach the state legislature individually. As such, an administrative body, the Assembly of the Academic Senate, was established. The system has evolved to provide checks and balances, with the idea to ensure the system benefits as a whole. At the campus level, faculty governance takes place via the Academic Senate, which is comprised of tenure track faculty. Under the umbrella of the Senate are many committees, the most important being the Committee on Committees. The Committee on Committees selects faculty to be represented on the other committees. The Academic Senate gives the faculty some responsibility for university operations and acts to be a stabilizing force. The chair serves for one year and is succeeded by the vice chair. At the UC system level, faculty are represented by the Assembly of the Academic Senate, of which the Academic Council acts as the primary administrative arm. The Council is made up of 21 people, representing the various campus Academic Senates and several committees within the Assembly of the Academic Senate. The Council puts forth measures for the Assembly to vote on once or twice a year.

3.7 Financial Management – Overview

Pierre Ouillet, the Chief Financial Officer for UCSD, gave an overview of the campus's financial situation. The position is a new one for the university, being created three years ago to get a better handle on campus finances in a rapidly changing environment. Pierre began by highlighting the recently developed strategic goals and several new initiatives that have resulted from those goals. Among them, he noted achievements in student access and diversity. More than one-third of undergraduates do not pay tuition thanks to financial aid. He then provided a breakdown of the overall campus budget of \$4.5 billion, \$1.2 billion of which constitutes the core operating budget, \$2 billion is from the health system, and about \$1 billion comes from research contracts and grants. A 10-year comparison of funding sources showed changes over time, including the reduction of state funding from 13% of the budget in FY2005/06 to 7% in FY2015/16. Non-resident tuition grew from 1% to 7%, and the clinical enterprise increased from 35% to 42% of the budget. These represent significant changes in a relatively short period. UCSD has adapted, but it had no choice given the decline in state funding. Going forward, the campus must grapple with inflation and continue to diversify its revenue sources to the extent it can. Non-resident enrollment is to be capped by the state, so the university is turning toward offering more master's and professional degrees, increasing its fundraising, and seeking more industry partnerships. Lastly, Pierre touched on his budgeting philosophy of simplifying its core budget reporting, financial discipline (i.e. no deficits), transparency, and continuing a culture of empowerment to incentivize academic units to grow.

3.8 Financial Management – Balanced Scorecard Approach

UCSD was the first university to adopt the balanced scorecard methodology in 1993. The balanced scorecard provides a holistic framework from which to understand how an organization is performing, enable data-driven decision making, more effectively communicate what it is doing, and tie these to strategic goals. The approach includes four perspectives: Financial/Stakeholder, Internal Process, Innovation/Growth, and the Customer. There are different ways to approach and define these perspectives. This provides flexibility for an organization to adapt the methodology to its situation. The balanced scorecard also provides a mechanism for connect individuals to the overall strategic goals. To get customer and stakeholder perspectives, UCSD has used annual surveys to measure faculty, staff, and student satisfaction in a variety of areas. The staff survey currently has a 67% response rate, which is quite high. Survey data, and the creation of key performance indicators (KPIs), then feed into other aspects of the

methodology. Importantly, the data and indicators provide accountability for how well a unit is doing on its goals. UCSD has also recently worked with other universities to adopt a similar methodology. One of the key benefits of doing so is that it allows for benchmarking to compare performance across multiple institutions.

3.9 Long Term Strategic Planning – Overview

When Pradeep Khosla became Chancellor in 2012, one of the early initiatives he undertook was the creation of the university's first strategic plan. Bob Neuhard oversaw the development and implementation of that process. In this session, Bob described how the plan came about and offered some lessons to the participants if they are to develop their own plans. In UCSD's case, Chancellor Khosla wanted a unifying vision for the campus, and he felt that it was important that it came from a bottom-up approach rather than top-down to ensure that there was broad support. He also felt having a strategic plan was important so that the university could take time to determine its future rather than constantly reacting to situations as they arose. The plan would establish timelines, actions, and clear priorities to enable better decision making, as well as establish an agile infrastructure so the campus can adapt to changing conditions. Bob then described the 15-month timeline that led up to the launch of the plan, including the use of an outside consultant, McKinsey, that had worked with other universities on their strategic plans, the use of a 50-person committee over a two-month period for initial planning, data gathering, and stakeholder outreach, which included town halls and numerous interactions. In the end, the process was difficult, but it proved to be as important as the final document. Nearly 10,000 people provided input, which demonstrated the broad-based buy-in that the Chancellor wanted. In addition to the creation of the five strategic goals and several early action items, the campus also learned that it had more financial flexibility than it thought.

3.10 Long Term Strategic Planning – Implementation

This session was devoted to describing best practices for implementing actions following the creation of a strategic plan. Throughout the session, several examples from UCSD showed how various units aligned their activities to the new strategic goals. Implementation offered another opportunity to engage stakeholders and build momentum. At UCSD, units are responsible for building the case for how their activities link to the strategic plan. If they want funding support for a new initiative, they must show how it relates to one or more of the goals, and develop metrics to track their

progress. The session reviewed how various units are being assessed. The Office of Strategic Initiatives (OSI), Bob Neuhard's group, can serve as a bridge to help units build that case. This is particularly important for new initiatives that are horizontal across multiple units. OSI reports to the CFO and has a line to the Chancellor. This helps ensure good communication up and down. The creation of the Standing Committee on Service and People Oriented Culture (SC-SPOC), which has active faculty involvement, was given as an example of an outcome of the strategic plan. The session concluded with an overview of different methods of outreach and engagement to campus stakeholders for both tracking progress and developing new initiatives to move forward on the university's goals.

3.11 Long Term Strategic Planning – SMART Metrics

Metrics define how to measure progress and success towards strategic goals. However, one must be careful about which metrics are used as they can track the wrong things. Good metrics should be targeted, focused, and measure progress over time. UCSD has adopted the SMART methodology, which is an acronym for specific (S), measureable (M), achievable (A), relevant (R), and timely (T). Good metrics should take into account end-to-end considerations so that a holistic view of impacts is captured. If metrics are too big or too vague they will be of limited value. The participants were given an exercise using a worksheet to develop SMART metrics based on Goal 5 of UCSD's strategic plan. The actual metrics that have been adopted were shown to the participants after they had presented their ideas.

3.12 Overview of Science Policy in the U.S.

The United States is perceived to have one of the most robust basic science and research systems in the world. This session provided an overview of how that system developed, some of the key federal agencies involved, examples of major government science initiatives, funding to universities, and a couple examples of government programs aimed at filling a gap in technology development. The session concluded with some recent policy trends and challenges going forward. Historically, the formative event for government science policy was the Second World War, where government funding of science projects led to the development of new weapons and capabilities. Moving into the Cold War, the government continued and expanded support for science in many areas, with the expectation that it would create benefits to the economy and society. The Department of Defense (DOD) and the National Institutes

of Health (NIH) combined represent more than half of current federal government R&D spending. DOD funding is 51% of the total, although most of that money is used to support the development and testing of new weapon systems rather than basic research. NIH, however, is the largest funder of basic science, and academic institutions are the primary recipients. Among the high profile government science initiatives over time are the Apollo program, finding a cure for cancer, funding new renewable energy sources, supporting research on HIV/AIDS, and the human genome project, among others. Universities are the largest performer of federal R&D, which constitutes a little more than 60% of university research funding. Most of this money is provided via competitively awarded grants to support research, facilities, equipment purchases, and student support (graduate students and post-docs). The Bayh-Dole Act of 1980 was enacted to provide an economic incentive for universities to commercialize the output of their research, which led to the creation of technology transfer offices across the country. However, transferring a new technology from the lab to the market is challenging. The Small Business Innovation Research (SBIR) grants were created to assist in closing this gap. The Advanced Technology Program (ATP) was also launched to help bring early stage technologies to market, but it was ultimately killed due to political issues. Among the recent trends are concerns about flat or declining (when accounting for inflation) federal R&D funding levels as well as whether there will be restrictions in certain areas under the new Trump Administration.

3.13 Research at UCSD: Office of Research Affairs (ORA)

UCSD's Vice Chancellor of Research Sandy Brown presented an overview of the Office of Research Affairs (ORA). Among ORA's mission and goals are to make it easier for faculty, students, and researchers to win contracts and grants, to support the awardees while they perform their work under the grant, and help accelerate the path to marketplace for innovative technologies that have commercial viability. The scale of UCSD's research enterprise is quite large: \$1.1 billion in funding from over 1,600 different entities. Last year, approximately 6,500 applications for funding were processed by the 40 staff in the Office of Contracts and Grants Administration (OCGA), which is part of ORA. OCGA is a customer-service oriented group that provides assistance in submitting and administering grants or contracts. For large, multi-institutional grants, there are additional staff who help gather and organize all the complex information needed to submit the application. ORA has also developed internal teams to review proposals before they go out. The result of these and other kinds of services helps contribute to UCSD's 10% higher than average success rate in winning grants. Additionally, ORA reorganized its approach to entrepreneurship,

innovation, and industry engagement a little over two years ago. Since then, several new innovation and entrepreneurship initiatives were launched and industry partnerships have increased between 15%-20%. Other ORA functions include government research relations, which is handled by a staff person in Washington DC, animal care and use, conflict of interest policies, research integrity and ethics, export control, and funding and scholarships for work being conducted in multi-disciplinary research fields.

3.14 Research Policies: Office of Contract and Grant Administration (OCGA)

The mission of the Office of Contract and Grant Administration (OCGA) is to support sponsored research projects throughout the life cycle of the award, from the identification of the opportunity, to award acceptance, and to final closeout. The staff aims to support principal investigators (PIs) as they compete for, win, and conduct work through research awards. OCGA does this with about 35 staff in its central office. Since 2010, the university has received around \$1 billion in sponsored research funding. That is twice the amount of funding in 2000. Currently, UCSD ranks fifth in the U.S. for university research expenditures. Over a ten-year period, UCSD has seen a 12% increase in the number of proposal submitted, a 35% increase in the number of actions (awards or renewals), a 50% increase in the funding received, and a 30% increase in the number of PIs funded. The type of sponsors vary, but the U.S. federal government provides the nearly 69% of funding, with the National Institutes of Health (NIH) and the National Science Foundation (NSF) being the two largest granting agencies. Private non-profit awards are 19% of funding, and industry funding represents about 12% of the total. To manage all of this, OCGA reviews contracts and grants prior to submission, negotiates terms and conditions to ensure they uphold the university's principles and does not expose it to too much risk (e.g. ensuring academic freedom, freedom to hire, intellectual property issues, and liability/indemnification, etc.), provides post-award administration and support, negotiates renewals, and works to develop relationships with sponsors. A significant amount of time is spent negotiating with for-profit industry sponsors, and therefore has to work closely with the university's technology transfer office. OCGA also works closely with the various compliance offices that are also in the Office of Research Administration (ORA).

3.15 Multidisciplinary Research

Senior Associate Vice Chancellor for Research Miroslav Krstic provided an overview of how multidisciplinary research is encouraged, organized, and administered at UCSD. The largest mechanism to support multidisciplinary work is the Organized Research Unit (ORU). Additionally, there are also incentives and award programs to create opportunities for faculty to start new centers or individually engage in multidisciplinary work. UCSD currently has 16 ORUs. These are entities that are like academic departments, but are only for research (not teaching) and are not permanent. However, the oldest ORU is over 40 years old. They usually result from a bottom-up effort by faculty to give some formal standing to a promising new research thrust. To be created, the ORU must bridge two or more dean/vice chancellor areas, and it is funded through the indirect costs (IDC) generated on its research funding. ORUs are subject to a formal review process that involves multiple stakeholders on campus, including faculty committees from the Academic Senate. This is to ensure that the ORU remains relevant and effective. Nine ORUs have been closed down in the past, and the review process ensures that there is transparency and proper justification for doing so. Each ORU is reviewed about every five years and the process takes about one year to complete. Following the review, an ORU may get approval to continue until the next review, or if problems are identified, put on a three-year probationary period to make corrections. If corrections are not made, the ORU may be closed down. The entire ORU system is reviewed about every eight years. Beyond ORUs, UCSD has the Center Launch Program, which provides \$300,000 per year to support the creation of new centers. Recipients get \$75,000 to cover startup costs and administrative support. There is also the Frontiers of Innovation Scholars Program (a total of \$2.8 million per year available to award), and Academic Senate research grants (a total of \$1.5 million per year available to award), which allow faculty and researchers to pursue multidisciplinary work. Lastly, UCSD also recognizes non-traditional outputs of multidisciplinary research during faculty and staff performance evaluations. These include the creation of new software, databases, devices, intellectual property, and policy recommendations.

3.16 International Outreach

Within ORA, international outreach falls under the government and international relations functions. Over the past two years, UCSD has been increasing its efforts to establish new partnerships with industry outside of the U.S., and with a particular emphasis on Asia. Japanese companies have been the first or second largest source of foreign industry awards in the past three years, and Japan has been within the top five

international source countries for giving over the past five years. At UCSD, most foreign industry awards have been concentrated in the Health Sciences (75%-80%) and Engineering (20%-25%). As such, the international outreach efforts to date have focused on building and sustaining relationships with Asian companies, often Japanese, and in health or engineering disciplines. Activities include developing industry sponsored research grants and/or contacts, launching a new visiting industry fellow research program, increasing marketing and publicity, and conducting a range of outreach efforts. Outreach efforts have taken the form of hosting symposia and conferences on the UCSD campus and inviting industry and academic participants from Asia. The UCSD-Kyoto University Joint Symposium in March 2016 is one example. UCSD has also increased its presence at conferences and symposia in Asia. One of the most important outreach efforts is the recent opening of the UCSD Tokyo Office in the Nihonbashi area. The office provides UCSD with a physical presence in Japan, and through its meeting and conference spaces, create new opportunities for UCSD faculty and staff to interact with current and potential partners. Going forward, UCSD is planning on launching a global innovation training program, developing custom symposium series, building an international research alliance, and expanding its geographic reach to Europe.

3.17 Research Administration Training Program

The large scale, complexity, and large scale of UCSD's research enterprise requires a lot of specific knowledge to manage effectively. However, there have been no professional training programs to ensure that staff have the capabilities to do so. Most learn on the job, and over time, different parts of UCSD have approached research administration a little differently. Unfortunately, this can result in frequent staff turnover and low levels in confidence to do the work at a high level and with consistency across campus. It can also result in improper award administration which could expose the university to audit risk, and/or damage its reputation. To address these problems, a training program was recently developed and launched after gaining approval from the Chancellor by linking it to the university's new strategic goals. Currently managed by one full time staff member, one part time administrator, and two student support workers, the program aims to offer four levels of increasingly advanced training, with each level providing training via a four-hour session one day per week over an eight week period. The first began in October 2016 targeted at the 450 research fund managers, with 32 staff completing the course. Higher levels courses will be rolled out over the next several years, with each targeting different levels of competencies and job types. The aim is to eventually offer a certificate to staff who complete a series of

courses, which can aid their professional development and opportunities for advancement.

3.18 Overview of Entrepreneurship Programs at the Rady School of Management

The Rady School of Management was founded in 2003 with an explicit emphasis on entrepreneurship in high technology areas. Over time, the Rady School has created numerous courses and initiatives to support high tech entrepreneurship. These exist under the umbrella of the California Institute for Innovation and Development (CIID). CIID incorporates incubators and accelerators for student founded companies, competitions, venture funding, mentorship, experiential learning activities, and community outreach efforts. The mystartupXX accelerator was established in 2012 to encourage UCSD students and alumni teams that have at least one woman founder to pursue a business idea. Teams are hosted for six months and receive mentorship and support. About 10 teams per year are accepted, but CIID plans to increase this to 20 teams per year. To date, 37 teams have gone through the accelerator. StartR followed mystartupXX in 2013 and builds off of a lab to market course where students develop a business case for an early stage technology. StartR accepts Rady students and recently graduated alumni at a rate of about 12 teams per year. Currently, 45 teams have gone through the accelerator. As with mystartupXX, StartR teams reside in the accelerator for six months. In addition to the accelerators, CIID is involved in the Triton Innovation Challenge, which provides prize money to winning teams and leads to an opportunity to be reviewed for investment by the Rady Venture Fund. The Rady Venture Fund is a small venture capital fund supported by a grant from the Scripps Family Foundation. Students who take a course (MGT 496) get to take a hands-on role in reviewing companies applying for investment and then decide on which will receive \$25,000 to \$75,000. There are restrictions on the fund. There are no limited partners, nor does UCSD take a board seat on companies that the fund invests in. UCSD cannot be the lead investor, and cannot invest in any student companies. Lastly, any gains from an investment must be returned to the fund. The Rady School has also incorporated experienced business people into its offerings through mentorship opportunities and an Entrepreneur-in-Residence (EIR) program. The Rady Innovation Fellows program provides students with a small stipend (about \$2,000) to work with a San Diego company or UCSD researcher on their business concepts. Going forward CIID is looking to expand opportunities for students through the creation of a social innovation focused accelerator and an accelerator targeted at military veterans. It is also looking to partner with other parts of UCSD, such as Health Sciences and the Jacobs School of Engineering through the Institute for the Global Entrepreneur.

3.19 Research Policies: Conflict of Interest

The Conflict of Interest Office assists university employees to assess and manage potential conflicts that may affect their professional judgement when engaged in research, teaching, and administration. This helps avoid damaging the reputation of the employee and the university, as well as maintains the credibility of the research. There are a range of situations that may pose a potential conflict, such as receiving outside income, job positions, equity ownership interests, gifts, loans, travel reimbursement, and intellectual property. The office has 4.5 FTEs and handled nearly 7,400 disclosures last year. For sponsored research, there are different state and federal rules for who must disclose and when. Within the federal government, there are also different conflict of interest reporting requirements for NIH and non-NIH awards. This session went over the disclosure process, what forms are required, and how reviews are conducted. Of note is the 15-member Independent Review Committee, 13 of which are faculty members. The committee weighs risks to the employee, the university, and if applicable, any human subjects that participate in the research study. For any identified risks, the committee recommends steps to mitigate the conflict, which is then sent to the Chancellor for final review and approval. The session concluded with several example scenarios where the participants determined if there might be a conflict of interest and then mitigation strategies where discussed.

3.20 Faculty Hiring, Retention, and Evaluation

Creating a world-class university depends on hiring faculty capable of providing high quality education and research. Since the end of World War II, the U.S. has built one of the best higher education systems in the world. Three key elements to this are the competition among universities to attract and retain the best professors, the high degree of mobility of professors to seek jobs in distant geographic locations, and the decentralized nature of higher education within the U.S., as well as the decentralized authority within most universities themselves. Competition among universities to be the best influences where top talent ends up. Universities as well as those seeking employment are very conscious of how universities and their academic departments are ranked, as well as word of mouth reputation. Higher ranked and well-regarded universities attract more highly qualified candidates. Culturally, the U.S. workforce tends to be much more open to moving large distances to pursue new job opportunities. Universities are aware of this, and often fly out potential candidates and their families for visits to get a sense of what the quality of life is like as part of the recruitment process. Hiring packages often include housing assistance and job offers for spouses.

The recruitment process has also become more transparent. In prior decades, deans or department chairs could make nearly unilateral hiring decisions. Now jobs are publicly posted and faculty hiring committees review the applications before making a formal recommendation. This creates greater fairness and more transparency to the process. The third key element is decentralization among and within institutions. There is no national ministry of education that dictates hiring policies. Universities are free to adopt their own approach, leading to differentiation and specialization in areas where they feel they can build and grow strong competencies. Within a university, strong supervision over departments does appear to lead to stronger institutions. The session concluded with a discussion of how faculty hiring and evaluation takes place at UCSD, including the timing of merit reviews that lead to tenure and who is involved in those reviews.

3.21 Academic Facilities, Resources, and Support Services

This session covered the facilities management functions at UCSD and how capital projects are financed. In many ways, UCSD is like a small city. There are over 400 buildings spread over 1,200 acres of land. Each day, over 45,000 people work, visit, and transit the campus. The campus also generates about 90% of its own energy, via two co-generation power facilities. The Facilities Management department is organized into five vertical functional units and two cross-cutting horizontal support units. The department has four funding sources: Its operations and management budget, deferred maintenance budget, utilities purchased by campus users, and recharge payments by campus customers for services. The department faces several large challenges, including an aging workforce, managing campus growth, and trying to get on top of a large amount of deferred maintenance. Due to reductions in staffing from the 2010 state budget cuts and an aging workforce, the department ended up with staffing levels well below the industry standard threshold for an organization of this size. Recent investments by the campus have allowed for new hires and a gradual reversing of this trend. The campus is also planned to grow dramatically in terms of students and the associated need for housing, classrooms, and other facilities. Facilities Management is trying to align its budget to accommodate that growth. Lastly, the university currently has an approximately \$1 billion deferred maintenance backlog. Recent investments and the spending down of a “carry over” have helped get the university on track.

The second portion of the session focused on funding models for new construction. In the past, the State of California provided money for capital projects. However, the last real money from the state for capital projects was in 2006. The economic crises and

following budget cuts forced dramatic changes for how UC campuses now fund new building construction. A major change was that the UC system took over the state's capital project debt and refinanced it since the UC system had a better credit rating than the state. This freed up money and allows the UC system to issue its own bonds on a project-by-project basis. Additionally, UCSD has also had to become more proactive in using investment vehicles to create new revenue streams that can support capital projects. Outside fundraising, often in the form of philanthropic gifts, is now more heavily relied upon. For instance, naming rights for a building are available if a donor contributes approximately 25% of the building cost, although the Chancellor may accept a minimum donation of \$10 million in return for rights. The session concluded with the findings of a building level analysis, which showed that the campus is currently spending only one-third of what it should be to properly maintain many of its buildings.

3.22 Financing Undergraduate Education

The UC system responded to reductions in state funding by increasing tuition and by increasing the number of non-resident students it enrolled. Higher costs put pressure on the ability for students to afford coming to UCSD, and therefore increased the need for financial aid and scholarships. Aid takes the form of grants, loans, and work study programs. Together with scholarships, UCSD provided \$375 million in aid last year, with funding coming from the federal government (39%), the state (29%), the UC system and/or UCSD (29%), and outside agencies (3%). Grants have different criteria for eligibility, depending on the demonstrated need, and provide different amounts of funding. The UC system does allocate one-third of its tuition revenue for financial aid for California resident students. Non-resident students, including international students, are not able to access this aid. There are also different types of loans that are available to students, including government-subsidized loans and private loans. Finally, scholarships are available, funded by the university or supported by external sources. The session then turned towards how financial need and the expected family contribution based on family income are calculated. Interestingly, UCSD students graduate with a lower average loan debt (\$21,000) versus other national public universities (\$27,000) and private universities (\$31,000). The session concluded by highlighting several Japanese corporations that sponsored scholarships for international graduate students.

3.23 Failed Initiatives and Lessons Learned

Speakers presented two case studies of ambitious initiatives that UCSD attempted, but were ultimately not realized for differing reasons, resulting in important lessons learned. The first was the creation of a school of architecture in the early 1990s that was essentially forced to close just a few years later due to state budget cuts. In the 1980s, then Chancellor Richard Atkinson wanted to take UCSD from being a good university to a great one. Professional schools were seen as one way to achieve that. A school of international affairs soon followed (International Relations and Pacific Studies, recently renamed as the School of Global Policy and Strategy). The thought was to build on this success with a school of architecture. The idea had strong support from the community, which saw a need for more architects, the faculty at UCSD, and even the UC system where other architecture schools at UCLA and UC Berkeley offered helpful advice. Following approval by the regents, a public symposium announcing the new school in 1989, and the appointment of a dean in 1990, the state entered an economic recession in 1991-1992. Budget cuts soon followed. The architecture school had a planned budget of \$1 million for 1992-1993, but only received half of that. This forced the school into survival mode, eliminating one of its two academic tracks. Soon discouraged faculty wanted out, and by 1993-1994 the dean decided to close the school down. UCSD was much more reliant on the state at that time, so the idea of pursuing funding from outside sources was not heavily considered. When the Rady School of Management was created in the early 2000s, this lesson was taken to heart as the founding dean was expected to generate a significant amount of fundraising from the very beginning.

The second case study was the attempted integration of an existing law school, Cal Western, into UCSD. The idea had been raised a couple times in the past, but came up a third time around 2006-2007. The challenge in this situation was that Cal Western, while decent, was not perceived to be a world class institution. There were concerns about how it would contribute to the intellectual quality of UCSD, how it would fit with other parts of campus and establish a competitive niche, and whether the faculty would be of UC caliber. Additionally, the law schools at some of the other UC campuses saw it as potential competition and were not very enthusiastic. However, there were strong advocates for the idea in the community, which meant UCSD had to consider the idea thoroughly. The economic recession of 2008 and the following budget cuts to the UC system essentially killed the idea as the financial resources that would have supported the integration dried up. The idea was officially “tabled” in 2009. Had the concept been for UCSD to establish its own law school from the ground up rather than integrate Cal Western, there may have been fewer concerns about its viability. However, it also would have required significantly more resources to get it started. Unlike the

architecture school, academic quality was an issue. In comparison with the architecture school, startup costs were not quite as tenuous since it would have been built off of Cal Western, although external economic conditions still played an important role in the idea's demise.

3.24 Overview of Innovation and Commercialization at UC San Diego

The function of the Office of Innovation and Commercialization (OIC) is to coordinate and support innovation-related activities across campus and to communicate the message of UCSD's capabilities internally and externally. One of UCSD's missions is public service, under which economic development falls. The university provides the talent and technologies that are an engine for the region's economic growth, contributing \$4.6 billion of economic impact annually. OIC is therefore tied to the campus's strategic goals of supporting economic and social prosperity. Through its programs and activities, OIC aims to accelerate commercialization and develop and entrepreneurial culture. Technology transfer falls within OIC's portfolio. The university generates 15-19 direct startups (formed around technology licensed from the university) per year, while another 10-15 companies are founded by faculty, students, and alumni on their own annually. It also handled a large number of disclosures, licenses, and patent filings. UCSD recently reorganized and renamed its tech transfer office to be more responsive and efficient, with the understanding that tech transfer is not a way to generate much revenue in the short term. Rather, the approach is to be more people and relationship-centric, with a view towards long term benefits. Agreements have been simplified and more options have been created to make the process of working with the university easier. OIC has also launched a series of programs and initiatives focused on education and outreach as people are the core of any innovation ecosystem. A new non-credit, free-of-charge entrepreneurship certificate based on four courses is now available, new incubators and accelerators have opened for students and faculty to use, and several new support programs involving experienced business mentors were launched. At the same time, UCSD worked to deepen its relationship with the broader community, partnering with many technology industry organizations to promote innovation and entrepreneurship. This enables a continuum of support to university spinoffs once they are ready to take the next step towards entering the commercial market.

3.25 Technology Transfer Issues

Being a large research university, UCSD generates a significant amount of technology transfer-related actions each year. There are about 400 new invention disclosures, of which about half are eligible for patent filing. There are also about 100 licenses annually, along with about 20 direct startups being formed. In total, there are approximately 4,400 actively managed cases that the Office of Innovation and Commercialization is currently overseeing. This activity generates approximately \$25 million in revenue each year. In the context of a \$4 billion total operating budget, of which \$1 billion is research, this is a tiny amount. As such, UCSD decided to not worry as much about recuperating costs up front when transferring technology. Rather, it would focus more on delivering better service and build stronger relationships with partners. New programs were put in place, such as a series of workshops focused on entrepreneurship and startup issues. These are open to anyone in the community, not just UCSD faculty and students. They have also started events and competitions to increase visibility and excitement around entrepreneurship. The recent Ignite conference had 800 attendees, about 300 of which came from Tijuana, the Mexican city adjacent to San Diego on the border. OIC is building stronger relationships with organizations in the community that support high tech entrepreneurs as well as work with local government to find ways to best help people involved in technology companies. For industry sponsored research and licensing agreements, OIC is simplifying the process to make it faster and easier. To decrease uncertainty and risk in working with university technology, OIC is starting a pilot program to create an option for industry to own IP up front under certain circumstances. OIC is also aiming to reduce the time to get deals completed from about four months to two months. Using shorter agreements are also part of this effort. To be more effective at licensing technology to the right partners, staff have developed a curated database of potential licensees and only select 15 companies at most to approach based on fit with the companies' portfolios.

3.26 Calit2/Qualcomm Institute Site Visit

The participants visited the Qualcomm Institute, the UCSD component of the California Institute for Telecommunications and Information Technology (Calit2). Calit2 is a joint institute shared between UCSD and UC Irvine. The visit began with a conversation with the Hon. Lynn Schenk, who served as Chief of Staff to California Governor Gray Davis, the governor under which Calit2 and three other state-supported institutes were created in the early 2000s. During the dot-com economic boom of the late 1990s,

California enjoyed a budget surplus thanks to increased revenue from state corporate and personal income taxes. The Governor decided that he had a unique opportunity to use some of that money to invest in the state's future via the creation of new science and technology-focused research centers that would conduct work in cutting edge areas. However, the governor required that interested parties had to secure a minimum of a two-to-one funding match to receive \$100 million from the state. There were some political challenges, but the governor was successful in getting the legislature to include funding for this initiative in the state budget. UCSD and UC Irvine teamed up for their proposal and successfully exceeded the matching funds requirement by raising \$300 million in additional funding, including many industry partners such as Qualcomm and Ericsson. The participants then received a tour of the Qualcomm Institute, stopping at a recently created incubator, the Innovation Space, a prototyping facility where professional staff are available to any campus faculty and student who need help building working prototypes, and finally to several clean rooms that are available not just to UCSD employees, but also to outside companies on a contract basis. The clean rooms have proven so successful that the Qualcomm Institute is planning on expanding them in the near future.

3.27 The Creation of the Rady School of Management

This session recalled how UCSD's Rady School of Management came about in 2003 and its evolution since that time. Prior to the school's creation, there was some debate about whether there was a need for another business school in the UC system. Several already existed, including the two highly regarded schools at UCLA and UC Berkeley. However, the approach at UCSD was to differentiate its school by focusing on technology and innovation, i.e. bringing new products from lab to market. Local San Diego technology community members were vocal advocates as their companies needed people who had technical backgrounds, yet could also address complex business issues. Internally, UCSD's faculty and administration supported this idea, and the university managed to find a wealthy donor who agreed to give \$50 million to launch the new school. However, the collapse of the dot-com boom and following downturn in the stock market forced the donor to withdraw his pledge. This was the environment that the new dean, Robert Sullivan, was hired into. He quickly had to find the necessary capital to get the school off the ground. Ernest Rady, a successful businessman, then stepped in with an offer of \$30 million. Ernest Rady also got other donors to contribute, such as Wells Fargo Bank, helping Dean Sullivan meet his fundraising goal. The Rady School of Management is also self-funded through a tuition sharing model. It does not get money from the state for its faculty under the normal

FTE-student funding formula. The UC Regents set tuition rates for professional schools higher than other graduate degrees, which allows Rady to capture more revenue to cover its costs. The school was the fastest on record to achieve accreditation, gaining that in 2011. It currently has 500 students in its master's degree programs, 20-25 PhD students, and approximately 2,000 students in its undergraduate minor degree offering (the largest minor by number of students at UCSD). It has also successfully worked with other parts of UCSD to develop support courses for other undergraduate degrees. Examples include courses related to project management, global health, and international studies. These support courses have helped not just the Rady School because of the tuition sharing, but also led to increased enrollments for the academic units that offer the degrees. Going forward, the Rady School has started new master's degree programs, such as the one in business analytics, and has partnered with the Jacobs School of Engineering to create the Institute for the Global Entrepreneur that will join business and engineering students in courses.

3.28 University Rankings and Campus Marketing and Communications

Universities are in an increasingly competitive environment to attract students and fundraising, especially as government funding declines. To be successful, a university must break through the clutter and rise above the rest. This presents a tough challenge for marketing and communication efforts. Within the U.S., many students, and importantly their parents, rely on external rankings of universities when they consider their choice for college. *U.S. News and World Report* is the most widely used, although its methods are very subjective, particularly since it uses survey data on universities' reputations. UCSD has started to take a longer term approach to reputational awareness by targeting "influencers", i.e. high school students, their parents, and high school student counselors. They want UCSD to be students' first choice, not second. To do that, it is carving out a branding niche and seeking student who they feel fit with that niche. UCSD hired an outside advertising firm using private money (not state money). To get a fresh and unique perspective, the firm selected was one that had a lot of corporate clients, but had never worked with a higher education institution. The result was to build on UCSD's history of breaking traditions and having faculty and students who pursue their own path to improve the world they live in. The messaging of "Break Things Better" was selected and a campaign launched across paid (advertising), earned (press releases, news articles), and owned (UCSD's websites and digital media outlets) media. As the media environment is changing, particularly among young students, marketing efforts are shifting to using more social media rather than TV and many print media channels. As the campaign is recent, not much data beyond the anecdotal has

been collected. However, there will be a one-year assessment to benchmark impact, make adjustments as necessary, and then reassess every couple of years.

3.29 Alumni Relations

Alumni relations at UCSD have evolved over time. In the past, most engagement was transactional, e.g. a monetary donation was sought. However, the office is now focused on forging lifelong connections and relationships with the more than 170,000 alumni. The belief is that alumni become part of a community not just for the years they are a student at UCSD, but for the next 50 or more years after they graduate. Rather than just contribute money, alumni can become advocates, leaders, and volunteers to help current and future students and the institution. Founded in 1974, the alumni relations office underwent a comprehensive reorganization in recent years, both for its internal structure, but also its approach. The result has been a near doubling of alumni donors, with 5,300 in 2009 and 10,000 in 2014. That said, alumni giving is a small percentage of the overall gifts to the university. For instance, alumni contributed 2% of the total during the last capital campaign. The aim is to try and hit 10% for the next campaign. Consistency in outreach and engagement is critical to building relationships. The alumni office has 60 staff, with many embedded in academic units to establish contact with students before they graduate. The office is moving away from being transactional and much more towards having a strong service orientation. The office is offering more career advice in order to improve its relevancy. In 2010 the office transitioned to be staffed by university employees. Previously it was an independent affiliated organization. Being in the university creates a more unified message. It is also working on improving its events, which often focus on showcasing successful alumni, by establishing a clear expectation of what will take place. It also is trying to improve its alumni tracking. At the moment, the office can reach approximately 90% of its alumni through phone or email. However, by now giving graduating students a lifetime email address, it hopes to increase that percentage to 95% or 98%. The office is also doing more internationally. About 20% of UCSD's students are foreign, with most of those being from China. The Alumni Association is therefore doing more events in Asia, both before students come to UCSD to prepare them for what is to come, and networking events for alumni.

3.30 Overview of UC San Diego Health Sciences

Five out of the ten UC campuses have medical centers (UC Davis, UC San Francisco, UCLA, UC Irvine, and UC San Diego). Together, these represent a \$9.7 billion enterprise that generates nearly \$17 billion in economic impact. It also provides a significant contribution to the health and welfare of the state, given the patients it serves and the procedures performed. At UCSD, Health Sciences is one of three organizational areas (general campus and the Scripps Institution of Oceanography being the other two). Health Sciences has over 1,000 students and brings in \$600 million of UCSD's \$1 billion in research funding each year. Faculty and researchers often work with industry, largely through clinical trials, but also on their own startups or consulting (one day per week may be allocated to outside activities). In addition to two hospitals and several clinical research centers, UCSD Health also has two professional schools – the School of Medicine and the Skaggs School of Pharmacy and Pharmaceutical Sciences. It is hoped that a public health school can be established in the future. Medical education is shared between the two professional schools. For instance, there are 130 medical school students and 60 Skaggs School students who share classes in a cohort. This creates more efficiency by reducing duplication. It also makes it more interesting for the students to mix with people from different backgrounds. Health Sciences is also collaborating with other parts of campus in multidisciplinary research areas. One example is the Institute for Engineering in Medicine with the Bioengineering Department. There are also medical faculty in the Qualcomm Institute working on wireless health technologies. New research areas, such as data analytics and the microbiome are leading the school to create an administrative environment that makes things easier for joint appointments. Translational medicine has also become critically important. Teaching, clinical studies, and research all have to be linked to support translational work. This is not just administratively, but also physically. For example, the new Altman Clinical and Translational Research Institute (CTRI) building is connected to the hospital next door. CTRI is a part of a \$1 billion capital expansion of the medical center, which includes the Jacobs Medical Center and a new cardiovascular center. This is to accommodate the anticipated increased demand for care in the region.

3.31 UC San Diego Health Sciences: School of Medicine

UC San Diego's medical school is the only one in the region, and it forges a link between education, research, and clinical care. Its first class matriculated in 1968, and it currently ranks 18th in the country out of 128 research-intensive medical schools. The Division of Medical Education oversees the first four years of medical school (termed

“undergraduate” although it is a post-baccalaureate program), graduate medical education, and continuing medical education. Gaining entry to UCSD’s medical school is highly competitive. There were 8,000 applications for 134 spots the most recent class. Of the new students, 83% were California residents. Tuition is \$38,000 per year, and students tend to have around \$110,000 in debt when the graduate, a figure lower than average. For admissions, the school started using a new mini interview process where candidates respond to different scenarios with different faculty members. This process is proving robust and good at weeding out those candidates who cannot communicate well. The school recently overhauled its curriculum to provide more active learning and better integrate science learning with clinical topics. The change took four years to plan and implement. While it was a difficult process, the curriculum changes have proven popular with students who now give much better ratings on student satisfaction surveys. In the future, the school is looking at implementing more team training and placing more emphasis on patient safety. Residency programs take anywhere from one to seven years for students to complete, depending on the focus area. There are six domains, with a total of 957 students and fellows participating. The session concluded with an overview of the new medical education building. Half of the \$70 million cost was funded by a state bond, with the other half coming from a UC bond. The building houses classes, administration offices, simulation rooms, 18 clinic rooms where actors serve as patients, and 22 operation rooms where students can work on animals and human cadavers.

3.32 UC San Diego Health Sciences: Skaggs School of Pharmacy and Pharmaceutical Sciences

The Skaggs School was launched in 2002 with 25 students in its first class and a \$500,000 budget. It now has 330 students and a \$34 million budget. The school is ranked 23rd out of 135 pharmacy schools in the U.S., making it the fastest school to break into the top 25. The budget crunch has affected the school in many ways. It has shifted from being state-supported to state-assisted, with state money really only being used for building construction and faculty salaries. It has to shift to operating more like a private school. Tuition and fees, which originally were \$7,184 in its first year, are now over \$33,000. This makes up 65% of the school’s budget. Other sources of funding include IDC recovered from research performed by faculty and some philanthropic giving. Being a relatively young school, it does not have alumni who have been professionally active long enough to donate significant amounts of money yet. Other changes include creating new master’s programs, creating online courses, and increasing the number of non-resident students. For the university as a whole, costs

were constrained by creating a tiered retirement benefits structure and employee furloughs for a period back in 2010-2011. The school's administrators have tried to become more aware of where budgetary pitfalls may be so that they can be proactive rather than be forced to react when it may be too late.

3.33 Overview of the Jacobs School of Engineering

Dean Al Pisano joined UCSD in 2013 after spending 30 years at UC Berkeley. The Jacobs School of Engineering (JSOE) represented a large career opportunity for him given its size. It currently has 8,700 students, 2,000 of which are graduate students, making it the largest engineering school in California. About 40% of the undergraduate students are the first in their family to go to college, and the student population is highly diverse. These are important factors, as the companies that are hiring JSOE graduates do not want traditional thinkers. They are looking for people who are team oriented and have strong emotional intelligence and critical thinking skills. JSOE has taken this on as an important teaching and research mission. Of its six academic units, half are considered to be in non-traditional disciplines, such as nano-engineering. Two years ago, the school also created a new series of faculty driven research centers. The Agile Centers, as they are known, are in cutting edge multidisciplinary area. If approved, a new center gets administrative support from the Dean's Office for two years, and then decreasing amounts after that to encourage sustainability. The centers must also attract five to ten industry members to show relevance and help the faculty know where the future technical challenges are. JSOE has also launched eight research initiatives in collaboration with other academic departments at UCSD. For example, the Envision Maker Studio is a collaboration with the Visual Arts department, and the Contextual Robotics Institute has engineering faculty working with faculty from Social Sciences. The Corporate Affiliates Program (CAP) is a successful long standing program that currently has more than 70 industry members who each pay annual dues to develop relationships with students, faculty, and JSOE's leadership. One of the school's major new initiatives in the near future will be focused on issues related to the digital future. Work will be focused on five different themes, and will be located in a new building. Industry participation is a must for this initiative, and to date, 11 companies have been approached to become partners.

3.34 Development and Alumni Relations at the Jacobs School of Engineering

Wil Burfitt provided an overview of the Jacobs School's approach to fundraising and alumni relations. Philanthropic gifts have increased from \$16.8 million in 2014 to being on track to hit \$25 million this year. This growth in giving represents a significant contribution to UCSD's \$2 billion capital campaign. With the new building for the Collaboratory for the Digital Future on the horizon, there are also important development milestones that need to be met. Of the total estimated \$180 million cost, JSOE is expecting to raise approximately \$60 million from donations. For instance, the building naming rights are available for \$35 million. Alumni relations are also an important aspect of the Jacobs School. There are almost 30,000 alumni, who are mostly concentrated in California. Qualcomm and Google represent the largest employers of graduates. This is particularly important when alumni have senior leadership in these companies. It makes it easier to schedule meetings to discuss areas of collaboration. Depending on the nature of the conversation, the dean can be brought in to discuss what kind of research is taking place at JSOE and its relevance to the company. Relationships with alumni are also critical as they may lead to philanthropic gifts. UCSD's largest alumni gift of \$18.5 million was donated by a computer science and engineering alumni. Other important gifts include \$125 million in total from the Joan and Irwin Jacobs Family Foundation and \$33 million from the Charles Lee Powell foundation.

3.35 Business Development at the Jacobs School of Engineering

Business development is about building relationships with potential partners and finding out what they are interested in. For working with industry, it is ideal to have a business development person who has an industry background. This helps with communication and to build confidence with those they are talking to. It is not sales, which is something that business development is often confused with. Rather, it being able to create that relationship and articulate a return on investment to those partners. A real world example of the approach was given based on recent dealing with a Fortune 500 company from Silicon Valley. A scan of the company's website revealed several goals the company is pursuing. These include developing 5G wireless technology, Internet of Things and cloud-based IT, and promoting greater diversity in its workforce. The approach was then built around highlighting what was UCSD is already doing in these areas. For instance, UCSD is ranked first in women graduates in STEM fields, and has increased the number of women hired as professors at the Jacobs School. Several research centers, including some of the new Agile Centers and the planned

development of the Collaboratory for the Digital Future, are focused on technology that align with the company's interests. Rather than sell, information about UCSD's capabilities was presented more along the lines of "did you know that UCSD..." in areas where the company might have interest in participating. The result was that the company became a CAP member, has sponsored \$1.8 million in research, and is in discussions to possibly contribute \$15 million or more to the new Collaboratory for the Digital Future.

3.36 Jacobs School of Engineering Corporate Affiliates Program

Anne O'Donnell presented her key lessons learned from her many years overseeing the Corporate Affiliates Program (CAP) at the Jacobs School. Among those lessons is the necessity of asking hard questions about what the university is doing and what the proper motivation should be. It is also important to know why a company wants to work with the university and be able to respond accordingly. Often, the highest priority for a company is getting access to talent, followed by new discoveries, educating their employees, civic relations/corporate social responsibility, and finally philanthropy. The Jacobs School CAP now has a large number of members who together pay about \$1 million a year in dues. This money is completely discretionary spending for the dean. Dues are based on a sliding scale depending on the size of the company's revenues. However, all companies receive the same benefits regardless of dues paid. This made it much easier to manage, rather than have staff being too focused on which company gets what. Benefits of joining the CAP are access to students, being able to work with faculty on research, and having a voice in the school's research and curriculum direction by three board meetings a year to discuss issues with the dean. As a case study, Anne described how she worked with L3 Technologies, a large aerospace, defense, and communications company, to provide a holistic model of engagement via the CAP. The session concluded with a discussion of developing metrics to determine how well engagement with members is working.

3.37 Institute for the Global Entrepreneur

The Institute for the Global Entrepreneur (IGE) is a recent collaboration between the Jacobs School of Engineering and the Rady School of Management to provide entrepreneurial education and training, as well as business and technology acceleration. It builds on the von Liebig Entrepreneurism Center, established in 2001 within the Jacobs School, and incorporates other programs at the Jacobs School and the Rady

School. One of IGE's key activities is operating as an NSF I-Corps site. Two teams, one that has graduated from the program and one that is currently in it, present to the group. The first was Lorenzo Ferrari, a post-doctoral student, with Fast LED, a new high speed communications relay component. He was followed by Vijay Shimoga, an undergraduate student who is pursuing an Internet of Things wireless health monitoring device. The participants gave feedback to both teams, similar to what volunteer business mentors do for the regular I-Corps program. In addition to I-Corps, IGE offers global training programs, such as those provided to Osaka University under the EDGE Program, and to UNITEC, the largest private university in Honduras. To support acceleration, IGE provides \$50,000 in proof of concept funding in four primary focus areas. It also feeds opportunities to the Triton Technology Fund, a \$12 million portion dedicated to UCSD companies out of a larger, independently managed venture capital fund.

3.38 Financial Management – Campus Budget Overview

Sylvia Lepe, the Assistant Vice Chancellor, Campus Budget Office, reiterated some aspects of the UCSD budget from the prior week. She provided more detail about how the budget is developed and the university's response to reductions in state funding. UCSD's core operating budget is \$1.2 billion. The revenue mix has changed in recent years in that the clinical enterprise portion has increased dramatically, state funding has decreased, and the amount from non-resident tuition has gone up. Operationally, the cuts led to a reduction in staff, as well as a restructuring of how the campus handled financial reporting and tracking. UCSD uses a fund accounting system. Following the cuts, it created a single fund for state money, tuition and fees, indirect cost (IDC), and business and investment income. This meant that for the first time, there was one account that showed the total revenue for the campus. Previously, that revenue was reported across multiple funds that were not linked. The university also established several endowments to create a more steady flow of resources, and also implemented a more transparent budgeting process with the Chancellor's Cabinet and Academic Senate. New budgets and cash management systems related to faculty hiring were also put in place. These efforts allow management to get a better handle on the current budget situation, and helps prepare the campus for future growth. UCSD is targeted to increase its student enrollment to 40,000 students from the current 31,000 students in ten years or less. With less money coming from the state, it will have to allocate resources carefully in order to handle that growth. The discussion then turned to IDC recovery and how those funds are allocated. The IDC rate for federal awards is 55%, which is a rate negotiated with the federal government about every four years. The

university is entering its next round of negotiations and expects that it will likely end up with a new rate of 57%, even though the actual rate is probably closer to 65%. Funds recovered through IDC are then channeled back to the university to pay for facilities and administrative expenses. Silvia provided more specific definitions of these expenses.

3.39 San Diego Supercomputer Center Visit

The participants concluded the day with a visit to the San Diego Supercomputer Center (SDSC). SDSC was created at UCSD in 1985 by NSF as a national computing resource. Since then it has grown to be the largest organized research unit (ORU) on campus in terms of its budget, which is approximately \$30 million per year. SDSC provides high performance computing capabilities to any NSF-funded researcher free of charge. Computing time is competitively allocated to proposals that pass a peer review process based on the justification for computing resources, rather than purely on the science. The projects SDSC tends to focus on are those in the “long tail of science”, i.e. many projects that do not require huge computing resources individually. SDSC’s computers also often serve as the backend for many web-based applications that are hosted elsewhere. These are referred to as the gateway community and this method is becoming more common for how people use SDSC’s resources. In terms of budget and operations, SDSC has seen its source of funding become much more diversified over the years, particularly as federal money has fluctuated over time. In the past, it was entirely dependent on NSF’s national computing system’s budget. It now gets funding from other parts of NSF, other federal agencies such as NIH, and even private (industry) sources. It is entirely supported on “soft money”, i.e. competitively awarded funding. SDSC has over 200 employees and its PIs have very high award rate, indicating their high quality and focus on filling valuable needs. SDSC has also physically expanded over the years, adding new additions to accommodate growth. The most recent expansion was funded in part through a UC-issued “Garamendi bond” (named after the author of the enabling legislation for bonds to pay for facility construction). SDSC is responsible for repaying the bond through money captured by IDC recovery.

3.40 Community Engagement

Community engagement by the university is based on a long history and tradition of universities providing programs of value to the community. In the U.S., land grant universities were established to help states develop economically, performing research

that could help the community. Community engagement by the university also builds on the tradition of providing continuing education, initially established by Oxford University. Together, these traditions have evolved more broadly into many types of community service. In the 1950s and 1960s, many universities either acquired or built hospitals and clinics, thereby taking on a public health mission. There was also a growth of engineering programs to provide practical training to industry. Later, leadership and corporate executive education programs were added. Universities also expanded their alumni relations and philanthropy efforts. In the 1980s and 1990s, economic development became a higher priority, and universities took on new outreach efforts and established technology transfer offices. At UCSD, Extension is one of the more community-facing divisions of the university, given the nature of the courses and services it provides. It has more than 200 employees and about \$55 million in annual revenue from nearly 70,000 enrollments across a wide range courses and programs. Beyond continuing education courses, UC San Diego Extension also has what it refers to as public programs. These include UCTV, the main broadcast and online media platform for the UC system; a center focused on doing research on topics relevant to the regional economy; pre-college and college prep programs; and public events and lecture series. It is well into the planning stages on developing a major presence in downtown San Diego with a new building that will help expand linkages with the community.

3.41 Charitable Giving and Volunteer Support

Charitable giving in the U.S. totaled \$477 billion in 2015. Education received about 15% of that, while health research comprised 8% of the total. Approximately three-quarters of donors were individuals versus corporations or philanthropic foundations. Although motivations vary, the top reason for making a gift tends to be passion for a particular issue. Contrary to conventional wisdom, the tax benefit is not the main motivator. However, it certainly is a nice outcome. There are state and federal regulations that govern charitable giving. For individuals, they may donate up to 50% of their adjusted gross income and gain the tax benefit. Corporations are allowed to donate 10% of their pre-tax earnings. Corporations also have varied motivations, including fulfilling their corporate social responsibility, supporting an area of research relevant to their products, and/or following the interests of their employees. When looking more closely at giving to higher education at the national level, the primary donors are foundations and corporations rather than individuals. Donations are made in areas that align with the mission of the organizations. Private universities have much higher level of alumni giving than public universities. The age of a university also

appears to be tied to the amount of giving. The older the university, the larger amount of gifts it receives. Collectively, the UC system received \$2 billion in gifts, mostly via foundations. Individuals made up about 30% of that, and alumni were 10%. Interestingly, non-alumni individuals gave more than alumni. When giving to UC, foundations often focused on health care, research, and education.

UCSD received \$212 million in charitable gifts in FY2016, of which 51% came from foundations and 2% from alumni. Of the total, 60% went to research, 8% for student support (scholarships and aid), 6% to capital projects, and 3% to instruction. Giving to UCSD is driven by its strong reputation for research and innovation. It appeals to the neighboring technology community. UCSD also has specialties that donors like, particularly in health. This is enabled by good development staff, with approximately 300 people across campus being involved in development in some manner. To manage the inflow of gifts and the associated stewardship and reporting requirements, the UCSD Foundation was set up as a public charity that complies with both government regulations and UC system policies. It is a separate legal entity, although its employees are paid by the university. It has a two-tier governance structure, with a volunteer board and paid officers. It receives approximately 40,000 gifts per year and manages \$800 million in assets. There are a total 45 staff members within the Foundation, mostly focused on handle accounting and reporting. Alumni giving represents a particular challenge. Donations from alumni are flat or declining for all universities nationwide, which mirrors declines in alumni participation rates. As a result, universities are trying to shift their approach to have deeper engagement via relationships and hoping to increase the amount given per individual. Engagement at UCSD can include volunteer groups, and getting students participating before they actually graduate. A positive student experience is strongly linked to future giving. There are currently more than 80 student groups. There are also several community oriented boards, such as the Chancellor's Associates where members provide a \$2,500 gift that goes towards scholarships. Another example is the Moores Cancer Center Board, which grew from donors' passion around curing cancer. Besides their financial contribution, they act as advocates for the work being done at the Center.

Making a compelling story is critical to generating philanthropic gifts. Therefore, a university will want the best story tellers to be part of the pitch. Development staff need to link the good story tellers to the potential donors. A good example was how Health Sciences Dean Dr. David Brenner told the story his vision for the new \$1 billion medical center and that compelled a member of the audience to donate \$75 million. This highlights how important communication skills are for academic leadership.

3.42 Program Wrap Up and Debrief

The program concluded with an opportunity for the participants to discuss some of the key things that they heard over the course of the two-week program. UCSD clearly has an ambitious vision and goals. It has plans for a dramatic increase in student enrollments and the associated capital expenditures in housing, classrooms, and facilities needed to support that. It has also rapidly adapted to changes in its funding environment. As it shifts from being a “state-supported” to “state-assisted” university, it hired its first CFO, reorganized its financial systems, developed its first strategic plan, expanded its healthcare operations, dramatically increased the number of non-resident students, launched several new professional and master’s degree programs, and shifted toward aggressively seeking more outside funding from foundations and corporations.

However, there are many significant risks. If there is a radical shift in how healthcare is funded through the federal government, then that may undermine revenue gains from UCSD’s health system. The increase in the student population created an imperative to accept students and help them financially. However, reductions in funding from the state means that parents are expected to cover a significant portion of tuition. Since UCSD is seen as in “high demand” based on the number of applications, it may not have too many challenges on that front. However, the state is capping the number of non-resident students that can be accepted. Further, it may end up having to accept students from wealthier families who can afford the tuition. That could create a socioeconomic bias in the student population and limit the school’s diversity. In the meantime, a diploma from UCSD is still seen as a value versus the quality of education received. Yet, as tuition goes up and begins to approach private university tuition levels, that value may not hold for much longer. It was also clear that UCSD needs to do a better job engaging with alumni, something that it is working on.

Participants noted that they got a sense of short term thinking. While the strategic plan provides a longer term vision that executive leadership have all impressively gotten on board with, it was clear that many things happened quickly. There was some concern that some longer term benefits might have been ignored or lost for short term gains. The participants recognized that the budget cuts were dramatic and required a quick response. They also wondered how easy it would be to implement a similar strategic plan in their home universities given the difference in system and culture.

For future versions of this program, some participants noted that they would like more insight into what is going on in academic areas outside of science and engineering, such as arts and humanities and the social sciences. These degree programs have large numbers of students, and have high quality faculty, but yet do not bring in lots of

outside funding. It would be good to see how those departments are adapting to the changing financial environment. There was also some interest in seeing what is being done around professional development for teaching faculty, given how important education is in the role of the university.